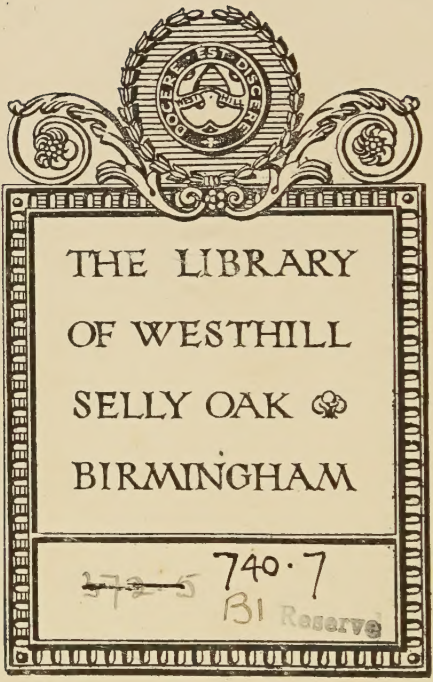

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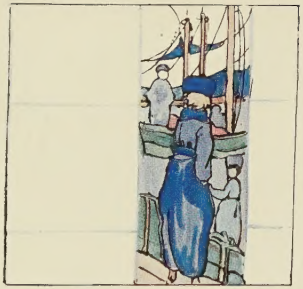

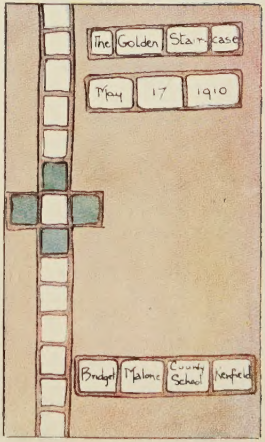

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THE SERVICE OF THE HAND IN THE SCHOOL

A LITTLE RECORD OF SCHOOL PRACTICE

BY

WOUTRINA A. BONE

LECTURER IN EDUCATION, UNIVERSITY OF SHEFFIELD

WITH TWO COLOURED PLATES AND OTHER ILLUSTRATIONS

BY

D. B. WINTER AND M. STEEN

LONGMANS, GREEN, AND CO.

39 PATERNOSTER ROW, LONDON

NEW YORK, BOMBAY, AND CALCUTTA

1913

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THE CHILD'S MOTTO: "Not what I *have*, but what I *do*, is my kingdom."

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INTRODUCTORY NOTE

I CANNOT lay claim to any great originality in the models and methods presented in this little book. The pages are offered as a record of what some of the students and teachers have done with me in the schools.

Some of these schools have been in the country, others in industrial cities. Some children have come from comfortable homes where they have been brightly, lovingly cared for, where wise parents have shared their lives in the nursery, the workshop, the play and schoolroom, the garden. Others have come from crowded tenement houses, and have only had the streets for a playground. Others again have come from tidy, careful homes, where the artisan parents have taken the greatest interest in their children's school life, and others have been the lonely children of rich parents, who are too socially busy to care about their little ones. The boys and girls have been of all ages from five to eighteen, and of varying temperaments.

But with so great a range, the appeal to make something, to "do something in the presence of

things," has almost always been instantly and joyfully responded to, and the revelation granted to both workers and those who watched and learnt, has been increasingly suggestive.

Very little has been made of technique ; it seemed to us that the children asked for it so naturally *when they were ready for it*, that the whole difficulty sank away. It no longer loomed large and overwhelmingly over us. We found we were able to meet the problem quite simply each day. "The world is so full of a number of things"—material that will respond to a gentle persuasive pinch of finger and thumb, of that which needs a strong power of deliberate weight ; material that calls for a vigorous, bold, and rapid treatment, and that which must be carefully, slowly, delicately, planned and carried out.

There is a great wealth of material around us, if we look for it outside the educational supply stores. Clean, yellow sand, moist, mouldable clay, stubborn cardboard, and soft yielding bast and vegetable fibres, fluid vivid colour, and lightly tinted paper, brittle twigs, and crumbling stones, closely woven fabrics, seasoned wood, tough leather, thin wire. It is to cast our net into every sea, and consider of our treasure the most suitable to our immediate purpose ; here is a field where the æsthetic appreciation and common-sense workmanship may well develop together in a fine balance.

There have often been difficulties to face—difficulties of time-tables, lack of space, large classes and

few tools, small classes made up of children of varying ages of 5–14 years, but "the winds and waves are always on the side of the ablest navigators," and, at any rate, we have certainly found it true, that out of necessity some of our happiest inspirations have sprung.

I wish now to thank all who have helped in the making of the book, and especially Professor Green, of Sheffield University, for valuable suggestions as to the general arrangement of subject matter, and the clearer vision of the function of handwork which he is continually giving.

WOUTRINA A. BONE.

January, 1913.

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PART I

CHAPTER I

SOME VALUES OF HANDWORK

We have travelled a long way from the old Dame School, where the three R's were taught, and the horn book used. About a hundred and twenty years ago object lessons crept into the school, and children were taught to express in adult language the qualities of the objects shown to them. Children might *look*, now and then *touch*, and perhaps in a few possible cases even taste. But now the much-ridiculed object lesson has developed into the actual *making of things*, the child worker in some cases actually reproducing processes of manufactured goods.

What considerations have effected this change? This chapter will attempt to set out a few of them.

1. It has been found desirable to introduce the more formal atmosphere of the school proper gradually to the young child entering, for the first time, a place where definite restrictions and careful time-table regulations are in operation.

It is injurious for the little child to step abruptly from the free, natural, spontaneous activities of his

home and the street, to the silent formal school. Its remoteness from his daily life disconcerts and bewilders him. He has, until he came there, been able to stop and experiment with material, to play in the builder's sand heap, to gather clippings from the hedge, to poke into the drain, to stay and watch the turnkey, to play with the rushing water.

He has always been busy with his hands and his head, until he came to school ; then for the first time in his life he was cut off from much material, and had to keep his hands, by which he had learnt so much, quietly down below the bench.

He came sparkling with interest, "Every bush a wood, every Aaron's rod blossoming," his hands were always out to feel, hold, learn,—his experience, as Helen Keller's, being, "I learn through my fingers!" But we actually put away from us the greatest help in his education, we deliberately cut off this approach to knowledge of the world about him—"we fed his bright mind on husks," while his fingers kept still below the desk.

School, *now*, is gradually becoming not a place apart, but a place in which recapitulation of experiences outside are seen, and in a wider, richer way, too, the boy is helped to formulate them. He is given a chance to move among things. The Hand, which has done so much to make man *master*, is being given the opportunities it deserves to carry his progress still further. "The hands of forgotten brave men have made . . . a world for us: . . . . They had not a

hammer to begin with; and yet Wren built St. Paul's; . . . Arachne started with forefinger and thumb, and had not even a distaff; yet thou seest Manchester, and cotton cloth!" . . .

2. The school's function is not merely the giving of instruction, it must provide opportunities for reflection, for assimilation; the pupil must have time to translate into terms of his own experience. Instead of merely recapitulating in words, we have found he can more fruitfully employ himself over material. To reflect, as the adult does, is tedious to the child; he has been sitting still, during the receptive period, now he must be "up and doing," translating immediately in terms of his own bodily activity. He is not capable of long quiet reflection. Man thinks over, considers, weighs, criticises, after he has passed the receptive stage, and this can be done without bodily activity; the value of his knowledge lies in the ruminating process, when a man makes his reading *his own;* but to a child this is too tedious to bear; it is enough that bodily activity has to a great extent to cease while he listens—he can't stay still to reflect as well! In handwork we get the mind "hovering over" the subject-matter given in the receptive stage, and the working in material is really the process of assimilation for him. The attention is caught, *tangled in* with the subject-matter, and the habit of consecutive activity is engendered. Ten minutes' talk, ten minutes' action, we have found to be better than an hour's talk alone.

3. We have learnt, too, to consider the child's impulse towards making. This shows interesting stages. The little child of four and five years is delighted to make the three basins belonging to Father, Mother, and little Bear. But although the new idea delights, he seldom uses the bowl, and probably leaves it happily behind him for some other play; he does not often ask for his model after he has made it. *The joy lies in the making.*

The older child makes—with some end in view—a doll's coat, because it is winter; a hutch, because of the rabbit.

4. Closely akin to this lies the next reason for having introduced handwork freely into the school. The boy learns more surely when he realises *the point* of learning; this is one of the most fundamental laws of life; it lies as the basis of almost every activity. The little child will not lose the next direction for the making of the box; the older boy will consider certain geometric properties if they affect his model. We know that if we have to teach a subject in which we are not far advanced ourselves, our own learning of it, in order to keep ahead of our pupils, is by no means slipshod; we know we must soon put our newly acquired knowledge to the test. In a similar way, the worker uses his learning *that minute.*

The interaction of the illustration of ideas by means of material, and the gaining of new ideas thereby, will form subject-matter for another chapter; insight into the great opportunity handwork gives for

the birth of new ideas, constantly becomes apparent to the worker.

But as the child grows increasingly able to deal with ideas, rather than isolated experiences only, a careful inquiry should surely be made as to whether a continuous dealing with things, with the hands, will not, unless carefully balanced, definitely cripple the vigour, and cloud the power of clear thinking in the growing mind.

The value of teaching by means of handwork is a limited one, and the strength of this medium is largely dependent upon the recognition of this.

5. We may be apt to test educational handwork almost exclusively on its intellectual value. There are other values as necessary to a well-developed character. By giving the child plenty of opportunity to make things, we are placing him in the position of a *Giver*, a most important attitude, full of promise if rightly directed.

What can a child give away? He has no money of his own; the penny he gets for the asking is of very little real value to him. He has no idea "how much." But he *has* an idea of the *trouble* this frame or box has cost, and so it means a definite *something* when he gives it. He is a true giver now. He has *put himself into his gift in the making*. All workers know this growing love for their creation; it becomes part of themselves. These little gifts have meant much effort on the part of the children, and it is good to realise the joy of giving that which has cost far

more than mere money. The gift may be crude and inaccurately made, but it should be *the best* the worker is capable of producing, and the giver is generally quite sensitive to this; the gift *must* be worthy, it must be *his best.* But the model may still be crude and inaccurate. Accuracy is not a characteristic that appeals early to the child; it may be regarded and encouraged later; but it is the adult who worships the accurate, because he knows to some extent the exquisite care it involves: the young worker has no conception of this yet, and to insist on a great degree of accuracy in early handwork is to force a stage before its time, and by doing so often crushing the larger generous forces at work. The accurate working of the Tower Bridge drawings, which enabled the two parts to meet to a hair's-breadth without friction, fills the adult with admiration; he takes into consideration the complexity of plan drawings, the allowance for the width of the drawn lines of construction, but the child cannot enter into that—yet.

6. There is the argument that all later mental processes concerned with thought and the ability to abstract, emerge from the background of sense experience, and that work in material provides this.

Activity about things gives data from which to classify later, when the age for classification and the more formal ordering of knowledge begins.

The child who knits her stocking, using the third needle to enable her to enclose a space, is storing up, though perhaps unaware of the principle, data from

which she will one day be able to appreciate the geometric truth that two straight lines cannot enclose a space. She appreciates the truth implicitly, though she cannot be said to know it explicitly. The child of six generally walks the shortest way to a house in the brick city,* before the roads are marked in for him at all, though he cannot formulate the definition of a straight line. This empirical knowledge is very valuable, and much activity about things gives, in the earlier stages, a rich store of experience over which to work later. This value is continually made apparent in the second part of the book.

7. There is another reason for the rapid advance of handwork in the school life of the child—perhaps the finest of all. Handwork is one of the best *will-forming* agents. Is it not true that "the worth of a man consists not in what he knows, but in what he wills"?

The *will to do* is a glorious thing to cultivate; the feeling of "*I can*" is one of the greatest inspirations any one can have. The joy of achieving is the greatest spur to further effort. The child has this feeling when he produces, and sees the result *at once*, that *very day*. He works this confident energy into his model, he is mighty to attempt. This is one of the greatest levers in the world's work: all explorers, colonists, have it.

Moral worth, *stability*, lies much in will. But a little child has very little will power; only "a wild

* Chapter III. in Part II.

impetuosity." He has plenty of involuntary interest, his attention darts about, "bird wit" Bacon calls it, a ceaseless, happy, flitting movement of mind. The teacher has to capture "bird wit," involuntary interest, and gradually form voluntary attention. The child is interested in *Doing:* and given plenty of material, his *wish* to do hardens into *will* to do. The child becomes easily an earnest worker. As he works upon his model his interest never flags, partly because the different stages it passes through in construction appeal to fresh activities. Now the worker is dealing with a plane, and now with surfaces erected at various angles to each other; now he is manipulating knife and cardboard, and now paint and narrow binding material; now he is judging relative sizes, and now he is occupied with more mechanical processes. Throughout the whole hour, partly because of the constant change, his attention is caught again and again; monotony, such as that involved in a too prolonged exercise to develop technique, can never be present; the power of concentration grows through arranging for these factors of change and interest.

No wonder that the making of things, rather than the superficial study of them in the old object lesson form, should find its way with increasing acceptance into the schools of to-day!

8. Handwork is Self-Revealing —

(a) To the Worker.
(b) To the Spectator.

The worker's strength and weakness are seen. Idea is made manifest in work, and we may also read character through looking over the models. Directly you "set a child *doing*, you individualise." From the teacher's point of view it is valuable, from the child's also. He tests himself. He sees that he *is* untidy, thoughtless, careless—he cannot get away from the evidence, and he suffers naturally from his own bad work. Because the result is quickly seen, he grows more careful and self-disciplined. "Skill to do comes of doing, knowledge comes by eyes always open, and working hands, and there is no knowledge that is not power," says Emerson.

The little child goes to bed tired out with doing nothing that as yet counts in the great world, but really he has been engaged in the greatest of all Wonders of Work, the Miracle of Making, the *making of himself*, and the more teachers can help him, by turning the schoolroom into a true workroom where theory grows gradually out of practice, the more effective will school life become as a preparation for the wider life outside.

The values of handwork more particularly in the life of the older child are found throughout the activities quoted in Part II., and also in Chapter III., but some of the foregoing apply also to him. Handwork promotes a fine readjustment among the class members, it gives the boy who may be slow and possibly stupid in the more formal activities a chance to rise to a higher level; he has the opportunity of establishing a better record in the practical handwork

time, and this reacts most certainly in his general attitude towards his fellows. The Stanz[1] children were not exceptional, and the "Gertrudes"[2] continually tell us of a healthful change in character, from sullen, stupid, or naughty children, to happy and intelligent ones, concomitant with their attendance in the practical workrooms. There is finally an incommensurable quantity found in the effect of handwork, which it is impossible to sum up.

In actualities there is so often that evasive quality that refuses to be catalogued. Even the exact science of mathematics has its recurring decimal, and reckons Infinity among its terms!

A relationship is established between master and boys, a sense of camaraderie is engendered, through the more intimate and less formal conditions of the true workroom which is only comparable perhaps with the literature hour, on the school time-table.

[1] One of Pestalozzi's schools.
[2] Of Pestalozzi's writings.

CHAPTER II

THE SERVICE OF THE HAND IN THE PROGRESS OF THE RACE

WHATEVER our opinions may be of the application of the Theory of Primitive Culture to our problem, we cannot afford to miss the valuable suggestions given us by the history of man and his tools.

It is undoubtedly true that man grew mentally brighter and more keenly aware of himself, through dealing with his environment, through the work of his hands, work born of necessity, and springing directly from experience. We need not look only to the past for this ; almost all stages of culture are with us to-day. The kitchen middens of Tierra del Fuego, the stone implements of the Bushman and Hottentot, the Stone Age but slowly passing yet in some parts of Australia and New Guinea and the South Sea Islands, the industries of weaving and pottery still carried on in primitive form by many native races, offer us indications of man's progressive way through the service of the hand.

The implements found in the upper portions of rivers, the river's former bed, the remains discovered

in the caves of France, Spain, the British Isles, tell us the story of man's slow triumph over material, and the way in which he struggled upward by a constant interaction of mind and hand activity; the names of the great eras are in themselves significant to hand-workers to-day, for they are given in terms of material —the Stone Age, the Later Stone Age, the age of Copper and Bronze, the Iron Age, the Steel Age.

The aim of this chapter is not to give a summary, however short, of these periods, but to gather a few significant points which may help us in our daily experience with the immature life of the child in modern schools.

When man first stooped to take the nearest thing lying at hand and use it for some definite purpose, he made a step forward. He looked beyond himself to the world of material with which he was surrounded, and *it was ready to help him.* He was still in that elementary stage of indiscriminate activity when "Anything would do!" a stick, a stone, a clod of clay lying handy would be eagerly snatched and flung, or used to crush and pound. Yet *something* was achieved when he began to make it serve the needs of the moment, when he discovered that by attending to his environment he could make it serve his ends. Through dealing with material he must gradually have gained the power to discriminate the more suitable from the rest; the heavier the missile (within bounds) the further it carried, the less friable the stone the better the hammer. From the stage of "Anything will do!"

—the indiscriminate stage—he grew more discerning ; *this* is better than *that*, for a certain purpose. Mental strength grew as his hands took *this*, rejected *that*, in his search for the best ; he was able to picture ahead—he needed a stone with a conical shape, a blunt edge, a tapering point, and first by accident, later by experiment, he chipped the flint to his liking.

Directly he was able to do this, man had taken long steps on the road ; he was able to foresee what he needed ; he was able to keep the vision while his hands worked steadily towards its practical accomplishment ; he was able to realise that there were ways of achieving his aim ; he deliberately planned his hafting operations. He no longer said, "Anything will do!" but, "Just this one thing will serve my purpose!" His work was no longer haphazard, fitful, but purposeful, hand and mind co-operating in the mastery over material, through the newly acquired power of selection.

Then, conditions altered, he was able, through the removal of the crippling element of fear, to set out to trap and catch, to hunt animals from which he used to flee in terror. Through becoming master of fire he became a more valiant worker, and soon he had a fresh stock of material to stimulate his activities ; the tendons, the muscles of animals, reinforced his store of vegetable fibres. Man, nothing daunted by changing conditions, kept adapting his material to the conditions under which he found himself ; the

Esquimaux to-day uses the fine tendons of the reindeer to strengthen the brittle drift-wood found on his shore, and so triumphantly makes his harpoon. The North American Indian brings the two materials of wood and sinew together. There again is an advance; there is a further discrimination in the suitability of one material working in conjunction with another; the combining medium, gum or glue has to be manipulated too. Man has travelled far from the primitive attitude of "Anything will do!" when he is able to make implements as ingenious as the sea-otter harpoon arrow, an implement made by the dwellers on the Alaskan coast to-day. The following description is taken from one of the handbooks of the Horniman Museum, compiled by the Curator.

"The shaft is of spruce, with feathers and notch at the one end, and at the other a bone foreshaft firmly attached, with a socket for the short barbed bone or ivory head. The base of the head is perforated for the attachment of the line, which is connected with the shaft at two points, in such a way that it offers the greatest possible resistance to being dragged through the water. When the arrow is discharged the head enters the flesh of the otter, and the rest of the arrow chops off. The line, which was rolled round the shaft, becomes unwound, and the shaft floats vertically in the water with the feathers above the surface, the weight of the bone foreshaft causing the other end to sink. No better combination of weapon, drag, and buoy, could be devised, and this type of arrow, both in design

and construction, must be regarded as one of the most ingenious contrivances of uncivilised man."

There is no need in this chapter to follow man further as he became master of the elements, through the days of simple machinery, when he made water and wind his servants, to turn his wheels and carry his goods to other peoples. The age of specialisation has dawned for him now, but his life in many ways shows, in spite of it, a growing purposeful activity, governed by rational co-operation, a nice judgment, a wise self-control, for the management of complicated machines calls for highly educated manipulative power. It needs the skilled hand. The song of the Broad Axe sings his achievement. "The shapes arise! shapes of factories, arsenals, foundries, markets! . . . the shapes arise! great ships and railroad tracts! . . . shapes bracing the earth, and braced with the whole earth."

Modern missionary enterprise tells the same story of the importance of handwork in the development of the whole human being. Sometimes necessity has compelled the attention to this claim.

A mission-house has to be built on a bog, and natives are employed to help. Later a fine cricket-ground is made by the native members of the mission station. "With great satisfaction we saw, as time went on, that the constant labour it entailed was creating in our children habits of industry," writes the New Guinea missionary in charge. As this was finished they developed new branches of industry, for a

lazy life no longer appealed to them. Boat repairing, laundry work, box- and mat-making, carpentering, prove media through which the indolent Papuan reaches a self-respecting healthy life ; it is by the steady training through the hand that moral fibre is constantly strengthened.

The same missionary writes : "It is a new, healthful, progressive life which, by the aid of industrial branches, we seek to make possible to these people . . . My brightest, most consistent, strongest Christians are to be found in my workshop. Would you dispense with the workshop because it is a secular concern, and because, as a missionary, I must have nothing to do with it? Can work, which assists me to achieve the highest results, because it has to do with a hammer, and not altogether with a hymn book, be properly called secular?"

Artisan missionaries are laying a sound foundation for further work among the backward races. Dr. Wardlaw Thompson, writing in this connection, says—

"Elementary education, in the ordinary sense of instruction in the three R's, is very good in its place, and must be carried on side by side with the preaching of the Gospel, but habits of sustained industry, the belief that honest hard work is honourable and worthy of men, and the power to be useful to a progressive community by some form of skilled labour, are even more important for the elevation of the backward races. He renders the kindest and truest service to

his fellows who best helps them to make themselves valuable in the life of the community."

The whole story of Mr. Booker Washington's endeavours with the negro population of America insists on the same necessity for recognising the power of the hand in the development of man. The Hampton and Tuskagee Institutes are his practical exponents. It is reasonable to allow plenty of opportunity for practical work with the hands, in the immature life of the child, just because we see the potency of its service in the evolution of the race.

It is well, too, for another reason, to give children a series of vivid pictures of man in his struggle upward, which, if partially interpreted in terms of their own experience, provide a rich background of colour for future reading. The world about us becomes more significant and rich with meaning if we have entered even a little way into the experience of a worker. A woollen fabric, to those who have washed and carded wool and used the spindle and loom, means more than to those whose first acquaintance with it is over the counter in the draper's shop, even though all have to buy the cloth there; we are almost bound to do that if we are to make the most of our generation.

We have lost something in the wholesale sweeping away of the object lesson by which we learnt processes, though in its artificial form it was burdening rather than enlightening. If, however, we can recapture the "processes" and present them in a vital way we shall do much to enrich the child's life, for that

which springs directly from experience is powerfully revealing.

Some little bricks of certain measurement were needed, and we set to work to make them of clay. We knew that clay shrank as it dried, and we tried to allow for this, but after many efforts it became clear that we must have a definite standard. Was there a shrinkage measure in existence? We did not know, but we felt the necessity; and *then* at the ripe moment we found our way to a pottery and asked. Men had travelled this way before; had been confronted by our difficulty. How had they solved it?

As necessity pressed, as the need arose from experience, we became wise in using the experience of others. The potter brought out his shrinkage measure —to him as familiar an article as the inch rule to us,— and again we realised the value of waiting to introduce the tool till the necessity for it confronts the worker. There was no need for us to travel laboriously the whole length of the way, experimenting with clay until we had made our own shrinkage rule; we are the "heirs of all the ages"; the thing had been achieved, and we were to come into possession through another man's labours, but the *need of such measure sprang from actual experience in material.* Experiment in the first place need never be a waste of time. It promotes the keen attitude, allows for individuality (an important point in the working of large classes), for adaptability, and resourcefulness.

There is another reason why the child should be familiar with the early endeavours of man with material.

The child in the Lower School has many interests strikingly akin to his. The problems of getting food and shelter were the first to be confronted by him. Children to-day are instantly awake to the interest of the same problem directly it is presented to them. No matter what the approach concerning food, shelter, hunting, cooking, building, may be, instantly keen intelligent questions are provoked.

How could he kill it? How did he make his arrows? What was his sling made of? How did he get the leather? How could he make tallow? Could I make fire come by rubbing?

The Old Testament stories presenting the simple nomadic life, and later the village life where primitive industries were carried on, are most suitable for these children. The larger setting of the stories of Abraham, and Joseph, the widow with her wonderful cruse of oil, is instantly appreciated by them; the making of the simple quern, the open hearth, the skin and woven fabrics for the tents, are all suitable for actually working over in material.

Vivid pictures, some of which may be worked out in terms of experience, may be given of man in the days before tools, when he had not yet discovered the possibilities of the material lying plentifully about him. He could only run away, lie hidden, or steal stealthily among the shadows to escape the peril, unless it were

close upon him, then he could only bite, and scratch, using his body as a weapon.

Sometimes, too, he had to use his fingers to dig out the edible root, till he had grown mentally strong enough to think of making and keeping by him a digging-stick.

In the next picture we see man using sticks and stones about him as tools, some for offence, some defence, some to be kept in the hand, some to be flung far off. In the preparation of food, flat stones were chosen for grinding, long ones for pestles; later there will be the picture of him carving the handles in the rude form of animals, as North-West American Indians do, but there is no time in the hardly-pressed life for this yet.

There are pictures of man content with the natural form of a gourd or shell for a cooking vessel, but soon, as with weapons, he begins to modify, and as his power to invent, to see possibilities in raw material, grows, we see him using his hands to very good purpose. Belts are fixed securely to drinking vessels, skins of animals are adapted to carry the heavy weight of water by adding strengthening bands.

Ornamentation of the bands is attempted, the band itself, with its jagged edges, sometimes suggesting it. Wooden bowls are carved, tools are carefully polished.

This picture shows man with a wealth of material about him, and an active mind, made so by active hands and stern necessity, making things which

continually bring him into a more civilised life. This presses upon him further needs. His digging-stick has developed into a plough; and this picture shows him trading with his neighbour, and using a measure in his bargaining.

The flint chipped tools have been thrown carelessly on the Downs long ago, for man has mastered fire, and the next pictures show him making the water and wind turn his big stones to grind his corn, and turn his lathe; he is with others, for he has learnt the wisdom of co-operation; he has learnt to carry the product of his work to far markets, to travel and send nearly all over the world. So from the solitary tree dweller, with no sense of responsibility, with ideas only concerned with food and shelter, emerges slowly the self-controlled citizen bearing his share in the responsibilities of his country. A series of experience lessons in some of these epochs in the Lower School will be of lasting value as the child moves up into a more complex life later. Gradually the ideal we hold for the children—that of becoming "active members of humanity, brotherly forces, free servants of civilisation," grows more possible, as we realise that in order for the ideal to be reached the child must become *himself* and a *brother*. He can only give himself if he is master of himself; he becomes master of himself through living completely in each stage as it comes. The little child, as primitive man, is non-social at the beginning, they are both unaware of themselves in potentiality. The little child is egoistic,

social instincts arise later. To make the child of three give away some of his toys is probably forcing the stage, he still plays isolated games, he has hardly felt the bond of society, and has certainly not recognised along with ownership the sense of responsibility It is wise for him to keep his toys for himself.

Some of the stages from the solitary to the community existence were incidentally shown in connection with the handwork in a school lately, the teachers only having the arrangement most suitable for their own children in their minds.

The children were making their own flags for Empire Day. The babies each made their own little coloured triangles which were to be strung on a thread across the room. Each child knew his *own flag*, and pointed it out carefully to the visitor.

The children of seven and eight years made a large Union Jack, by sewing strips of bunting together. Here, although the children were quite content to have made a collective flag, they eagerly pointed out *their* bit of sewing. "I stitched from *there* to *there*." "That was *my* strip." In the classes in the school proper the children from ten years had also made a flag on the same principle, but here not a child attempted to show his own work—the flag represented the work of the Form, and the children were content to throw their individual bit of work into the collective whole. And so, in the later stages, primitive man emerges gradually into the full activities of organised differentiated life, and we see

the older school-children forming *group* associations for work—for a time. Suggestive methods suitable to this stage are given in Scott's "Social Education," where groups of school children form to carry out certain activities for short periods of time—such as gardening, bookbinding, photography—with a self-elected leader; these groups are often broken up, and the members merged into the general community. A later chapter dealing with the growth of Guilds may offer suggestive parallels. This is a fascinating subject to the boys and girls of the adolescent periods.

CHAPTER III

THE THREE TYPES OF WORKMEN: THE LABOURER, THE CRAFTSMAN, THE ARTIST

In our rapid review of man's progress, made chiefly by dealing with the material world about him, we have followed him from the first rude stages of experiment and barter, through the significant period when the *tool* became a factor in his development, and trade ensued; through the Age of Fear, Combat, and Chase, bringing him at last to the Metal Age, where he became master of simple machinery.

Let us trace him further, and we shall recognise the craftsman and the apprentice of the earlier centuries, the boy who thoroughly learned each detail of his handicraft and increasingly loved it through the growing knowledge, learned the craft from a master, who, in his turn, often had the artist's joy in expressing beautiful thoughts in material; we shall see, too, the women workers in their homes, spinning and weaving cloth for the household. Later, with the elaboration of machinery, the house crafts, with the splendid scope they offered in showing "process," died down, and we see figures of the Revival—craftsmen and

artists combined in the workers; as William Morris and Cobden-Sanderson. "These men put on the workman's blouse and wrought again in the workshop." We shall recognise, too, in the modern industrial life, the labourer robbed of all joy in work. "The Road Mender" gives us a true enough picture of him:— "The swift stride of civilisation is leaving behind individual effort, and turning man into the Dæmon of a machine. To and fro in front of the long loom, lifting a lever at either end, paces he who once with painstaking intelligence drove the shuttle. *Then* he tasted the joy of completed work, that which his eye had looked upon, and his hands had handled; now his work is as little finished as the web of Penelope. Once the reaper grasped the golden corn stems, and with dexterous sweep of sickle set free the treasure of the earth. Once the creatures of the field caught the flare of scarlet and blue as the frail poppies and sturdy corn-cockles laid down their beauty at his feet; now he sits serene on Juggernaut's car, its guiding Dæmon, and the field is silent to him.

"As with the web and the grain, so with the wood and stone in the treasure-house of our needs . . . Now the many live in the brain-sweat of the few; and it must be so, for as little as great King Canute could stay the sea until it had reached the appointed place, so little can we raise a barrier to the wave of progress, and say, 'Thus far and no farther shalt thou come.' What then? This at least: if we live in an age of mechanism, let us see to it that we are a race of

intelligent mechanics ; and if man is to be a Dæmon of a machine, let him know the setting of the knives, the rise of the piston, the part that each wheel and rod plays in the economy of the whole, the part that he busily plays, co-operating with it."

When specialisation reaches our industrial life, it often produces the most terrible type of worker. Mary Wilkins, in "The Portion of Labour," gives us a dreary history of the man who spends his life cutting an invariable number of uppers for shoes out of a sheet of leather ; his child, Ellen Brewster, leaves school and starts at the same work, and the deadly round is set again. Father and daughter have no responsibility, no joy in the finished article, no sense of possession, they can only work blindly, dumbly on, having no brightening, widening future, no stimulus to quicken the torpid mind—only the pay to bind the narrow horizon more closely down on the worker's dim vision.

There is another picture given by Mr. Whall in his delightful book on stained glass work (Artistic Crafts Series). A certain scheme of colour had to be carried out, and the master carefully talked over with his men the effect he wished to produce. One day he was quickly called down to the workshop ; and it appeared that, in experimenting, a glorious shade of colour had been unexpectedly produced, which seemed to beautify the window still more than the original scheme would have done—so it seemed to the workers ; and themselves sharing in the joy of expressing such beauty,

they called their master to see if he agreed. And the work proceeded, master and men co-operating with one another.

Here is all the "difference between a blacksmith and a chainmaker, a carpenter and a turner of one special kind of leg for a table." In the one case the degenerate type of labourer is produced, who, when his work stops, through being identified with it, dies too. Herbart has a picture of the man—not many-sided in interest—who warms his life at the solitary spark; when it flickers out, his soul is left cold and shivering in a barren darkness. With Browning, we may cry:

> "I want to know a butcher paints,
> A baker rhymes for his pursuit;
> Candlestick-maker much acquaints
> His soul with song."

And Dr. Greville Macdonald reminds us that the "Highland crofter not many years since was alike a thinker and doer, finely educated in mind and hand. He was strong with his plough, great with his song. He was shepherd—in itself a noble calling—fisherman, and carpenter. I think, too, he wove of winter nights; most certainly he read his Testament in Greek . . . . One thing alone his genius cannot rise above—the doom of industrialism."

There is a grave danger that some of our hand-work may produce a worker of no worthier type than the labourer. Boys who *must* work from an undeviating plan, without a chance of modification from beginning

to end; boys who, when they are asked in the woodshops, "What are you making?" reply, "Model 3—Model 7"; boys who are "only going to keep it in a box with the others when it is finished," are in a fair way of becoming of the labourer type. Girls who practise all stitches until perfect regularity is reached, on a fine strip of material, are surely getting the same attitude. Work divorced from real life, specimens made for practice and not of necessity, will never kindle enough interest in the immature worker's life to promote a courageous, self-initiated effort. The joy of creation can never be theirs, and one of the greatest injuries that *can* ever be done to any growing child-mind is to kill the delight of making.

We have considered the style of work produced by the labourer and the craftsman, and have hinted that the ideal workman is the combined artist and craftsman; the man who has some idea to express, and has the skill to express it in most suitable terms. There rises in the history of the race and in the individual the desire to ornament, to make beautiful; the labourer knows in the bitterness of his soul the truth of Ruskin's saying, "Life without industry is guilt; industry without art is brutality." "The best part of every work is that which shows the personal touch, the best part of every work is always inexplicable."

Some of the simple things made by the peasant have a true beauty shining through them. They express the joy in pure colour, as in the weaving of the Norwegian girls' aprons, the little picture on the

wooden bowl for the milk; the quaint figures carved in the Black Forest show a keen sense of humour.

The joy of creating, or interpreting one's self in terms of material is too vital to be ignored, and in our schemes of handwork we must give much scope for this; we are much concerned with handwork as an expressive medium.

"Proper ornamentation is largely attached to the eye; it is pleasant thought expressed in the speech of the tool"; it makes for the expansion of the self, it makes for the abounding joy of life.

We hardly know the origin of decorative work, but it almost certainly depended for its development upon surplus energy, and leisure time. Perhaps it sprang from pure accident, the marking of the wicker in criss-cross on the soft clay vessel, and the inability of the worker to disentangle the essential from the non-essential; perhaps from the utilitarian idea of strengthening weak places by bands, the pinching and rubbing on of rims, spouts, handles, clasps; perhaps the rude thumb and nail marks of the hand suggested further ornament; perhaps it sprang from the necessity of distinguishing one's own vessel from a neighbour's; it is still more possible that it arose from the instinct to appear beautiful and impressive in the eyes of the opposite sex.

At any rate, the *social* element is strongly present, and great steps have been taken by the race and the child when the wish is shown to adorn and beautify

belongings. "It is no small thing to make a useful thing beautiful."

We recognise that stage in our school children, and remember it sympathetically ourselves. In the early adolescent period, when wonderful new values were crowding upon us, when we were struggling to get master of our uncertain selves, when there was little sense of proportion, when we were, by turns, very shy and extremely dogmatic and aggressive—experiments of all kinds were tried; the girl appeared with her hair arranged differently, and all the collars of her frocks cut off; the very uncertain adolescent was only trying to assert herself to herself!

See the uncertain adolescent at work.

He who finds expression so difficult, or altogether impossible in words, and yet is conscious of the idea struggling within him, is here able to express himself in terms of material. Yet this must be done with judgment, the exaggeration belonging to the period is naturally checked by the nature of his tool and his medium. The stencil plate will fail if sufficient ties are not carefully planned, the covering of the book must be considered in conjunction with the tooling, the limits of the loom will condition the arrangement of a simple border to something approaching a chequer; and if the worker is quick to see his advantage he will cease to chafe at the outwardly imposed restrictions, but, recognising the laws of his craft, he will learn the wisdom of reckoning with them.

The art of decoration appeals to him, and here

again he has to realise that "enough is as good as a feast." The essence of beauty is the message it brings. The decoration must stand for something, and it is false art so to overladen it that the spirit cannot shine through. It may be that the general effect of tranquillity is needed, and the worker must ruthlessly cut away all disturbing broken elements, however much he delights in them otherwise. Anything hampering the utility of the object, the steady standing of the plate, the pouring of the jug, the light streaming from the lamp, must be instantly condemned. It is good for the worker to submit himself to this discipline.

It has been taken for granted that the necessity of the application of the design to some definite purpose has been fully realised. Ornament must in these school stages be kept in close touch with the actualities of life. It is not fruitful to set merely the making of a pattern. The design must *stand for something*, it must be *meaningful*. If the design is for the School Magazine, let it hold some element symbolic of the characteristic of that school, for "æsthetic worth lies in relationships," at any rate, in this case, *i.e.* idea and outward expression.

It is interesting in this connection to notice the history and significance of the well-known "shell" pattern on paisley, which is so often reproduced on our fabrics to-day.

This shell, or pine, is a conventionalised form of a religious symbol of the East; it stands for *life*, in its

fundamental meaning, of perpetuation and renewal; of food also.

The pine or cone was the male or pollen-bearing inflorescence of the date palm, and consequently a symbol of richest significance. In Chaldea the date palm was the first necessity of existence, and so played a large part in the designer's life. The pattern stands as a symbol of the Creator, the Master of life, in the ornaments of Persia, Egypt, Palestine; although to us it is but a meaningless tracing, it really comes, fraught with the highest sentiment, out of the ages. When a craftsman is his own designer he works in the symbolism which governs his life—a significant hint to the workers of to-day.

In the workroom, then, the adolescent, impatient of restraint, with exaggerated ideas of liberty, with ideals only half appreciated struggling for expression, is gratefully taught by his tools and material that the recognition of law is a condition of true freedom, that from limitations arise undreamed-of possibilities. People at this stage cannot help directly very much,—the boy and girl must begin to sift, judge, build again for themselves, but the service of the hand is of undoubted value put here in his life.

There is another aspect in which handwork may successfully appeal to the older children in the schools. It is in the presentation of the history of the craft. Other men of other times, under other conditions, have faced the same practical problems that confront the workers to-day—indeed—more—it is by their

successful overcoming that we are able to follow readily to-day. They have left us their tools, their beautifully conscientious work; there are records full of interest to be read.

To a class of older boys and girls employed in binding their own books, and designing the covers for themselves, it will be interesting to read Froissart's description of a volume presented to Richard II.

"I presented it to him, in his chamber, for I had it with me, and laid it on his bed; he opened it, and looked within it with much pleasure. He ought to have been pleased, for it was handsomely written and illuminated, and bound in crimson velvet, with ten silver-gilt studs, and roses of the same in the middle, with two large clasps of silver-gilt richly worked with roses in the centre."

"*The history of the craft*" is a suggestive phrase, and opens up a wide field before us. Not only may the workers learn to bind their school books, and mend the school music, but they may be interested to follow the slow steps of the men dealing with its difficulties, varying with the needs of each century and nation. The universality of the weaving industry opens another chapter; reproductions of the most ancient illustrations of looms and weaving found among the wall-paintings in a tomb in Egypt, can be shown, and compared with the Greek type. "The principles of weaving, traced out from their origins, to their greatest perfection in the eighteenth century, are

identical with those of the most highly-developed modern inventions."

There are some exceedingly interesting pages in Dr. Stanley Hall's chapter—Industrial Education [Educational Problems]—on this aspect of handwork.

"Every teacher in this department" (raffia work), he says, "should saturate his mind with such literature as G. W. James' 'Indian Basketry';" he "considers basketry the mother of poetry, and shows its relations to Indian legends and ceremonials; describes the tribes, colours, materials, weaves, stitches, designs, uses, conventionalisation, and the marvellous way in which the symbolism of animals, plants, the sky, sea, which is often sacredly secret, is wrought out." He proceeds to give a fascinating extract describing the symbolism of much of the Indian weaving.

Later, he suggests a chink through which some vital stream of interest might penetrate to the labourer caught in industrial doom and darkness. One thinks of Andrew and Ellen Brewster again, in the grim "Portion of Labour." Let books on the leading trades be written, he urges. "The *Shoe Book* should describe hides and leathers, tanning, old and new methods, with a little of the natural history of the animals; describe the process of taking them, curing and shipping, each stage in the factory . . . the history of the festivals and organisations from St. Crispin and the guilds down . . . the social conditions in shoe towns. . . ." The story of the craft, rightly told, would tend to give it some degree of professional and

humanistic interest and dignity, which the most unskilled and transient employé would feel. It would foster an *esprit de corps*, pride in membership, and, above all, an intelligent view of the whole field, which would make labour more valuable and more loyal.

There is no need to wait till the worker gets to the workshop. Cannot handwork, taken in this broader setting, promote the colour and warmth in the history and civic lessons of the school? Later chapters record our attempts in this direction.

PART II

PRACTICAL RECORD

CHAPTER I

SOME OF OUR WORKING RULES

THE second part of the book is essentially practical; it deals with the activities of the children in the school and work rooms, and it is in this working time that many shrewd sayings on the conduct of life are wrought out in experience.

Perhaps it is hardly possible to transcribe to any extent the spirit in which the work is done, but the following working rules are given as suggestive. The children sometimes print these with a decorative border, for their class-rooms. There is undoubtedly a "motto-loving" stage to which this readily appeals, and it is certainly true that a sudden inspiration, encouragement, direction, caution, is often flung over to the worker, as he straightens his back, and lifts his eyes from the table to the large print on the wall.

The children in the early stages of handwork are always having to be reminded to "put down the tools"—"not to play with the ruler"—especially

now that freer methods have dismissed the formal drill of tools.

The children formulate manifestly wise rules for themselves, such as 4 and 5.

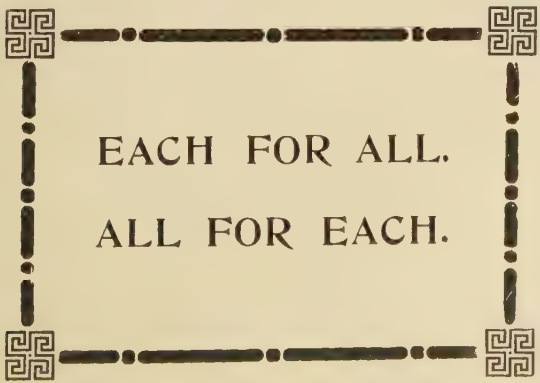
They appreciate a crisp saying summing up in a few words some of their own experience, and setting possible ideals before them; sometimes they bring from their own reading a proverb or quotation they consider helpful, and this may be adopted by the class as a "Rule."

1. "There are nine and sixty ways of constructing tribal lays, and every single one of them is right."

—*R. Kipling.*

2. "Some men think that rules should be made of cast iron. I believe they should be made of rubber so that they can be stretched to fit any particular case, and then spring back into shape again. . . . The really important part of a rule is the exception to it."—*Gorgon Grahame.*

3. Each for All. All for each.



4. A good workman only takes up his tools as he needs them.

5. A place for everything, and everything in its place.

6. "By smiting one becomes a smith."

7. A man who never makes mistakes, never makes anything.

8. There is no shame in making a mistake *once*, but no one should make the same mistake *twice.*

THERE IS NO SHAME
IN MAKING A MISTAKE ONCE,
BUT NO ONE SHOULD
MAKE THE SAME MISTAKE TWICE.

9. "Attempt the end, and never stand to doubt.
Nothing so hard, but search will find it out."

—*R. Herrick.*

10. "Skill to do comes of doing, knowledge comes by eyes always open, and working hands, and there is no knowledge that is not power."

—*Emerson.*

CHAPTER II

THE CONSIDERATION OF SCHEMES OF WORK

DIRECTLY the formal setting out of schemes confronts us, we realise the significant difference between the consideration of handwork as a subject—or as a method, exclusively, sometimes as a combination of both. Taken in its larger usefulness, where, as a factor in the development of the self, it is not merely a subject but much more powerfully a method, with a wide and inspiring aim before it, we are met by the real difficulty of setting it within the bounds of a scheme.

The general attitude of the maker of these schemes, then, should be noted before the schemes themselves are considered.

Realising on the one hand that in order for handwork to prove a *vital* factor in the school, it must not be taken in isolation, but must make itself felt in the other activities of the school, playground, and home, the scheme must not be self-contained. Yet, on the other hand, in order to get the highest effectiveness, we must arrange that definite purposeful activity should be always going forward, always progressively suited to the growing needs of the children in the school.

The formulation of some scheme really elastically

interpreted may save us from spasmodic endeavour, from haphazard activity; a growing purpose may gradually show itself, as the work unfolds. For instance, handwork will follow the dominant interest of the children at various stages of development.[1] This can be traced in the schemes below in connection with an interest in games and play.

In planning the schemes, then, it will be wise to try to balance the elasticity and freedom so essential, with a definitely purposeful continuity running from standard to standard.

We must also arrange for variety in material and treatment; we must keep in close contact with the children's growing needs, and these two considerations cannot be set down in much more than general terms.

The schemes following are merely suggestive because the varying conditions as to type of school again insist (in addition to the above arguments) on the necessity of a liberal interpretation.

It may serve for the sake of clearness to give some general scheme of forms of handwork suitable to the different standards; but even here, many variations must be made, and no rigid rule should cripple the working.

[1] The growth of the social instinct can also be noted, and met. It must not be forced, and as the babies are frankly self-centred they are not asked to do anything for any one. The making of things for group work shows the beginning of the neighbourly attitude; as it grows stronger the making of objects for school use appears, to be used in the children's room; later, toys are made for the babies, and in V., VI., and VII. standards social service takes a high place.

The book deals with the individual working out of many of the activities suggested below.

INFANTS.—Play with things, as Doll's house, brick building, sand plays, merely weighing, emptying, filling, turning out, etc. Plenty of little wooden jugs and jars. Cutting paper for nursery story pictures. Making things in clay. Colour-matching games, with other sense games. Drawing with coloured chalks, balls, small carts, reels and cotton, reins, brooms, small dust pans and brush, jumping figures, scrap books.

Most of these things are made by the other children in the school. The babies merely play freely with them.

STANDARD I.—Children's play house—large house into which several children can really go. Things to make for it. Bed clothes, table cloths, curtains (in big-stitch sewing), weaving carpets, mats; mounting pictures, making wallpaper, making utensils in clay (baked). Boys and girls do sewing, knitting useful things for self and dolls. Group-work in sand—farmyard, railway, primitive life—with handwork arising from it. Illustrations of "Hiawatha," "The Epic of Finland," "Kalevala," or whatever story-work the class is taking. Foreign scenes. Paper-cutting illustrations for room: and scrap books. Bast objects—reins, skipping ropes. Domino making. Picture card making and playing.

STANDARD II.—Some things made for small and large dolls' houses and gardens (picture frames, etc.).

Dusters and flags for school. Baskets of cane. Paper, hessian, and holland objects of use to children themselves, as book covers, frames, bags, boot and book bags, baskets. Knitting useful things for self and dolls. Group-work. Foreign scenes. Primitive life. Games interest—bean bags, marble bags, puzzles, targets, carts from boxes. Scrap books. Picture card making and playing. Dominoes. Drawing and brushwork.

STANDARD III.—Objects of use to self and school, leading to accuracy of measurement. Chart boards prepared for specimens, etc. Sewing useful things for self and dolls, or poorer school children. Scrap books for babies. Illustrative objects in connection with history and geography, as British village, Norman castle and gateway; flags. Some objects needed for dramatic plays—shields, armour, helmets, swords. Plays and games—puzzles, boards, targets. Things needed in sand pile, or for babies to use in sand, as wind and water mills, churches, houses, shops, in cardboard. Illustrative books. Drawing and brushwork.

STANDARD IV.—Light woodwork, furniture for both houses, ladders and barrows for doll's and children's house, gardens, etc. Toys for babies and Standard I. Jumping figures in card and wood. Flags. Puzzles. Illustrative work, as Standard II. Sewing useful things for self, or poorer child. Simple decoration. Several dolls dressed for younger children. Games; draught boards, kites, bridge board, puzzles.

Collecting apparatus—boxes made into cupboards, shelf trays. Drawing and brushwork.

STANDARDS V., VI., VII.—Social service takes form of bookbinding, mending music. Making of shadow stick, scales, frames, presses, bird table, baskets. Simple carpentering to make box cupboards, fit up shelves, etc. Boys and girls—mending furniture, soldering. Girls mend and adapt old clothes —sewing machine, simple decoration. Scrap book. Drawing and brushwork.

Games and plays—toys for younger children, as jumping figures in wood and card, carts from boxes, mounting trays for own collection, sledge, insect nets. The history of some craft is taken.

A short note on the above points :—

The scrap book, which appears throughout, could be made by each form for itself, the bigger children making a real card scrap book for the babies. These books may be individual property, or a few may be hung in the schoolroom ; they may contain drawings and picture cuttings of the stories, plays, etc., of the little ones. The jungle scrap book will have pictures of Shere Khan, Mowgli, Kaa, Hathi, Baloo, the Lone Wolf, Baghæra. The "Kalevala" will show the forging of the magic Sampo, Kantele and the pine forests of Finland. Later these scrap books are dignified with the name of illustrative books, and the older children paste scraps of print relevant to certain periods of history besides the drawing and verses they make.

Children from Standard V. make and keep their

own account books, in which they note the stock ; the teacher's bills are consulted, the expenditure measured. The keeping of these is not made a burden, but notice is sometimes given that by a certain date the note books will be compared, and stock taken together. The children use these books as a workman uses his, to jot down general estimates. Neatly ruled lines with immaculate figures are not of primary importance ; the real significance of the note books lies in their practical worth. The children keep their books close at hand when working.

Simple decoration of the schoolroom — friezes, stencil, and paper cutting—can be undertaken in the time of year when gardening is not possible.

Sewing is continuous from Standard I. throughout the school. Boys take it to end of Standard II., learning to mend holes, patch, seam, and sew on tapes and buttons. Decorative work is taken throughout ; large coloured stitches on hessian start the course in Standard I., transition is made in Standards II., III. to casement cloth and finer flourishing thread. The children do not take the fine white sewing stitch until 10 years of age.

My children's house in which children of six can play, measures about 5½ feet high, 6 feet frontage, and 5 feet deep. It is simply a skeleton of thin wood, and a sloping roof fits over the top. The front has a little swing door and two windows.

The boys of the Upper Standards are delighted to fill in the walls and roof with thick card, painted to

show bricks, etc. The furniture, carpets, curtains, crockery, etc., are made by the whole school, and the small children play house with large dolls and with still smaller babies of the Infants' room.

We will next consider the material at hand. In all classes a liberal stock of different material should be stored—cheap and common material can be collected, brought largely by the children themselves. Expensive apparatus should not be encouraged. It is even better for each child to have a box of his own in which he can store his little collection of material. *He possesses himself in his possessions*, he has a free range of choice, and can decide for himself the suitable occasion for selecting from his treasure box, for that which he collects and uses should serve our mutual purpose well. These are: wood left over in the timber-yard, different shaped blocks of a handable size, quite different from the eight tidy bricks which emerge from Gift III. and IV. boxes; rough bits of plank and soap boxes; cotton reels, paper, and cherry stones; sticks, scraps of slate and tin, old nails, string and corks; lead paper from tea packets, silver paper from chocolates, old post cards, tram tickets, bits of feathers, ribbons, and stuffs. There is no rubbish to a child; it will all "come in handy," to him, and must be saved.

Plenty of grocers' bright blue and grey paper, thin card, book covers, raffia, straw, sand, sticks, string, clay, coloured chalks, wallpaper books, water colours; hessian and holland fabric, wool, thrums, paste, and

big wooden bricks then will fill the cupboard of the Infants' and Junior schoolrooms. Strip wood, ordinary wood, soap boxes, paint, varnish, water colour, stencil paper, cardboard (thick and thin), sticks, paper, wire, thread, glue, holland fabric, calico, coloured flourishing thread, will be found in the Upper School.

The school might possess a couple of punches, and metal rims for making holes in cardboard. A general tool box might be kept, one senior boy and girl having charge of it. Paste can be made by the girls at cookery, and provided fresh every week in each classroom, in gallipots with paper covers.

Methods must differ continually according to the needs and ages of the children, and happily also with the teachers' real interest, courage, and inspiration. Here are a few suggestions :—

(*a*) Divide into groups. Discuss the essential characteristics of the objects to be made. Material is distributed. Get to work. Objects critically examined by the class. Suggestions for improvement.

(*b*) Models from one class are distributed among other children, who are invited to examine and draw plans of another size, and new models are made with an extra feature added, as a box with a tray, or a fresh division.

(*c*) Notice is given one week that some object, perhaps any kind of cart, will be made in some days' time. The boys look up the Irish jaunting car, the Flemish dog-cart, the fish cart of Holland, the waggon, hay and farm cart, the two and four-wheeled

carts of our own streets, the speared wheels of the Roman and British chariots, the Japanese rickshaw. Drawings are made, and either (*a*) the children come prepared to make individual models, or (*b*) the class breaks up into groups voting for certain models, and leaders supervise the work of the rest.

(*d*) Examination of a model. The working plan arrived at by the class is recorded by one on the board, and all make the object.

(*e*) Simple directions, with measurements and plans, are given out, and the children work to them.

(*f*) The reverse order may sometimes be taken, and a plan with the descriptive writing is required concerning the models placed on the desks. This may soon degenerate into a very mechanical exercise, and it is wise to use it very sparingly. *Some point must always be given* to this work ; the children may take the descriptions home and make models from them. These are brought to the next class, and the children heartily criticise each other's productions. A great deal of accurate work will be demanded *by the children themselves* in this way.

(*g*) A free time is provided when the children make Christmas presents, or anything which appeals to them. Individual choice is again made. Free access is allowed to the box of stored material. Sometimes the children take turns to wait upon each other in giving out and collecting material. There is generally time for these monitors to do some work for

themselves, and they are quite eager to finish at home. The constant movement is regulated by the class itself. In these ways the child learns that it is only in the recognition of law that true liberty can be realised, and that both teacher and class are under the same law, not arbitrarily made, but a law making certainly for the general good of the class, and one which is gradually formed by the class itself.

Now that we have taken a general survey of some of the considerations affecting the making of our schemes of work, it may be interesting to add a report of a simple little inquiry we made into the things children like to make for themselves, and as to whether they like being helped or prefer to be free. The arrangement may seem contrary to common sense, and suggests fitting the child to the scheme; we have made our plans—now, what has the child to say? but this is assuredly not the intention. The addition of the inquiry is meant to suggest once more the need of elasticity in scheme making, and to leave the maker of time tables and requisition lists as open minded as the beginning of the chapter found him.

THE INQUIRY.

The questions set were:—

1. What would you make if you could choose your own work in the handwork hour?

2. Do you like being helped, and taught, or do you prefer to work at your job alone?

The centres of inquiry were a boys' Secondary School,
a girls' Secondary School,
a mixed Council School.

The children were from 6–18 years in the Secondary Schools.

The children were from 6–15 years in the Council Schools.

I. Council School, mixed, out of 366 children,
141 wanted help.
184 did not.
41 qualified by asking for the minimum of help.

II. In the girls' Secondary, out of 47 girls,
19 wanted help.
18 did not.
10 qualified.

III. In the boys' Secondary, out of 64 boys, from 12–19 years of age,
34 wanted help.
20 did not.
10 qualified.

I wanted to know whether the desire to be helped grew or dwindled in the workers as they went up the school, but there are too many factors in the answers to lead to the forming of any clear hypothesis; some young children saw no difficulty in attempting the making of steam engines and houses and required no help, while others loved authority and liked to be told what to do. Some older children, whose imagination had received the inevitable check, selected warily, choosing to ask

for help in difficulties, or rejecting elaborate things which they foresaw they could not do unaided.

But in other ways the very limited little inquiry was suggestive, and I submit the following report upon it :—

The qualified answers were illuminating. A difficulty was often felt in starting, but after the initial effort had been made the children felt they could go on fairly well alone. "I should like to be started, but not helped afterwards." "I should like to have help over difficult parts"; putting in sleeves, joints in boxes and racks, were specified. "I should like to ask if a hard bit comes."

Some said they would like to do one model with help and then do another quite alone.

There were many who wanted the teacher *to be there*, in case of need. "I should like the teacher to see my work, though not to help." "I should like to ask some one when in doubt." "I should like to ask if I got in a muddle." "I should like the teacher to see it was all right." A boy, fixing covers to paper readers to strengthen them, said, "Just come to look if I do the backs right, thank you." "I should like some one present to instruct me, in order to have the thing done properly, being myself inadequate for such a task" (a small cabinet after Louis XIV. style !). "I should be glad to have some one near me to correct and help me, but would like to be independent to some extent." "I would rather some experienced person were there to help me if I made any mistake." "I should like some

one well acquainted with wood work at my side." "I should like to do it alone all through, and be criticised at the end," comes from a VII. Standard boy. Many of the children, from 13–18, asked for "a few suggestions," "a few hints," and then to be left alone. A girl in Standard VII. would like help over her dressmaking, "if only I might have my own way over the trimming"; and a boy of 17, who said he would like to make a cabinet with drawers, wanted "some one to advise, and, if necessary, help me to do the most difficult parts, but not one who enforces the use of a certain wood, or the adoption of a particular design."

Many older children made the distinction between being helped and taught. "I should like to be taught, not helped."

Constantly came the somewhat significant qualification, "I should only like to be taught (or helped) when I do not know how to go on."

It was interesting to note some of the reasons children gave for liking to do their own work unaided. "I like to test myself." "I like to be left to do my work because I shall be able to see whether I could really do it or not." "It is my own when I have done it myself." "I shall never learn if I am never helped." "I like to have plenty of room, I like to find out how to make things myself." "I like to make clothes alone, then I can tell if they are properly made."

The pride resulting from doing something quite alone was often shown. "I should like to say I had done it myself, and that nobody had helped, then

anyone would know I could make a nice petticoat without help." "I would like to say I had done it all myself." "I would rather puzzle out a problem than be told about it." "My mother will think me clever if I do it alone." "I would rather do it by myself, because I should feel proud of myself if it was a success." This was quite clearly stated by a girl of twelve. "I do not like being helped and shown when I have an idea of my own. I prefer to follow my own ideas." "I would rather work out the matter for myself, because if no one was near, another time, I should not know how to make a certain thing or how to cook." "I prefer to do *my own thing all through*, then I know what I have done." "I should think more of it if I did it myself." "When I have been told to make anything, I generally like to work it myself. If I find I cannot manage to work it out, I can ask somebody to give me a hint."

One little set of eight boys gave practically the same answer, quite proudly, to the question as to whether they preferred to work alone on their job or not. "I *do* work alone and I like it." "We fellows do it by ourselves, and we like doing it." This was not antisocial, for the boys were employed on group-work, but it was carried on in a room in which there was no teacher and very little supervision—the teacher only coming in now and then in the term to see how things were going.

But many children naturally love to acknowledge authority. "May I?" "Must we?" "I like you to

tell me," show that they sometimes wish more than suggestion, something really direct and categorical. In the Council School, out of 366, 141 asked for direct help without qualification. In the two Secondary Schools, out of 94, 48 asked for direct help without qualification.

The little inquiry did not give as much help as I hoped over the things children like to make. The form of question was partly to blame, "in the hand-work hour," was unfortunate, and many children instantly associated it with a choice to be made from the models their teachers had chosen for them for years. So there were many soap boxes, and tooth-brush racks, pillow slips, egg stands, tidies, and round rulers.

Among the other things desirable were baskets, frocks, embroidering parts of dresses ("with my own pattern"), painting pictures of soldiers and little love birds, a storm, a yellow daffodil, probably the latest achievement. To trim a hat with roses and forget-me-nots was one gay little maid's choice, and another wished to make a bag with pink strings, "the pink strings would look pretty on me; wouldn't it look pretty on me?" A handkerchief with a green border, and "my name in the corner"; "an embroidered set of cuffs and collar, white linen, and blue stitches"; "an embroidered necktie with a hair ribbon to match," show the awakening desire to make dainty things to wear; the love of colour is shown several times too.

Among other things the girls longed to make were "a little house, with tables, chairs, three beds, a little lady, a little baby, and a father man." Wooden carts, shops, tea sets in clay, petticoats, pinafores, cakes and custards, tarts and milk puddings, lace in knitting and crochet, camisoles and teacakes, dolls' clothes, and dolls' bedclothes, jellies, clay maps of India and China, garments of all kinds, strong wooden boxes, a night-gown, table centres and counterpanes, and—a small meat and potato pie.

The boys whose horizons were not bounded by tooth-brush racks, wooden egg-stands, and soap boxes, wished to make cupboards for egg collections, and shells, a duck house, "a hencoop for nine hens," a chest of drawers, tables, chairs, "a desk with a roll top, two drawers, and two pigeon holes," a mahogany cabinet with twelve drawers, and, finally, a pipe organ! These were mostly boys of 15 to 17 years of age, and there was evidently no limit to their ambition.

We are confronted with a problem in comparing the lists of the two sets of boys. There will be disappointment over the very elaborate things desired, and only perhaps a loss of temper and material, for there must be a limit to skill, and disillusionment may be bad for the worker. But no one can seriously believe that many boys are in earnest when they demand to make a tooth-brush rack above everything else! A tooth-brush is rather an abomination to many school boys, while others have never had one

at all. It is probably regarded by nearly all under 15 years as a necessary evil where it is known at all.

If certain exercises must be taught, would it not be better to frankly tell the boys "this bit of practice *must* be done, before you can make another model, practise then for the sake of getting the skill—doing without the faint veneer of "making something useful"—or else could we not reduce to simplest form something that *does* appeal to the boy more truly? Can we really not defer technique till the *need* for it is felt?

The younger boys wished to make waggons of boxes, cradles, blotters, steamships, a "coal truck to run down a mine," picture frames, houses, boats, bows and arrows; we know that many *do* make them too, very well. The papers, at any rate, gave some suggestions as to the children's attitude towards the teacher, whether right or wrong. Is his function to stand by and watch, to give the hint, to help in trouble, to launch, to restrain, to encourage, to criticise, *to be there when he is wanted?* Apparently to about half the class he is not wanted to insist on unwelcome directions being carried into effect. Is he to yield to those who are less confident, and give direct instruction *always, to all?*

Is it possible to arrange for those workers who feel so strongly that they would like to test themselves, to go on quietly alone, while those who need definite help are having it? Could we allow a wider choice of model to be made, without unduly upsetting a

carefully graded course? Are some of the desires children tell us freely really worth considering, or are they influenced by the moment only? Can children by their frankness help us over the serious problem of when and how to teach technique? Do they really need time to experiment for themselves sometimes? Should we treat all the children in the handwork class alike, and teach them on the same method? Do some children really find the direct instruction method sometimes unnecessarily *dull?* Can this be altered? Is there sometimes such a combination as a teacher who is not a genius, taking a child who *is?*

CHAPTER III

THE BABY ROOM

THE scheme of handwork at the beginning of this section suggests that in the Baby Room there should be ample opportunity for the playing with things—playing that has little further end than the mere delight of the movement of the moment, the delight which carrying, lifting, drawing, emptying, scooping, heaping involve.

It is not so much to satisfy the desire of beholding a sand castle finely turretted, and knowing it to be the work of your own hands, as for the joy of heaping, and heaping, and heaping the sand, that the little child sets to work.

Nan

The marginal pictures show children at work, and we need only ask ourselves a few questions before deciding what to fit up in our Baby Rooms.

Nan sits at the table or desk, with the regulation sand tray in front of her, a few ounces of sand are allowed her,

and finger and thumb set to work in this poor little area, to do their restricted best.

Sally and Dick stand at a low, long shelf which has been so fixed to the wall that it can be let down flat against it, in time of need of more floor space.

The children are provided with little wooden buckets, tubs, cups, dishes of all sizes and shapes, and they fill and empty, press and weigh, and scoop in the generous sand *whole-handedly*, and *whole-heartedly*.

Again Nan sits at her desk and waits while her teacher counts 1, 2, 3, 4, 5, 6, and then finds she has eight little bricks with which to build.[1]

The other children are on the floor, taking *the bricks with both hands to any number they need*. They are not yet concerned with halves and eighths; here is fine building material and space to do it well.

[1] The formal gift boxes and directions of Froebel.

Which arrangement is most surely meeting the children's physical needs? Nan's careful finger work, or the great easy spread of the boy, the pull up of the knee, the bending, stretching, balance, co-ordination of movement of the whole body as seen in the rest of the children?

Young children need a plentiful supply of material, simple in character, and offering scope for

free movements of the body. A child in the Baby

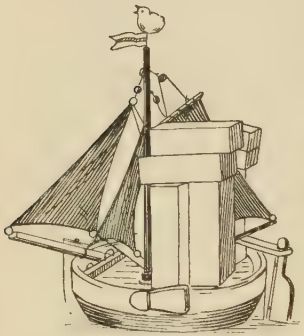
Room likes to use toys of different kinds together, he does not when left to himself choose exclusively

bricks, or sand, but presses all that seems desirable into the service of the moment.

The Zuyder Zee fishing boat has been eagerly seized, and the bricks are piled up on the decks. To the two-year-old boy they are men going a voyage—to the older brother of four they represent cargo.

Two fluffy yellow chicks take part in the play, one crowning the mast, clinging on for dear life to the orange striped flag of the Netherlands, the other taking refuge below the brown sail.

Sand may be bought from a builder's yard at six shillings a load. It should be watered with disinfectant often, and thoroughly cleared away, and a fresh supply brought in every month. The shelves cost very little to fit up, and the elder boys of the workshop are often proud to do this.



The building blocks can be cut by the elder boys; good proportionate measures may easily be taken from the standard building brick. We find $4\frac{1}{2}$ by $2\frac{1}{4}$ by $1\frac{1}{2}$ inch very suitable. Timber yard agents give the price at *7s. 6d.* for 100 of this size.

The Building Activities may well be extended beyond the Baby Room. Mr. Wells, in "Floor Games," gives plenty of suggestions for elaborate work with boys and girls of ten years of age. Let me sketch a simpler one. The possibilities of brick building on the floor are almost unlimited; the children are so quick to work along these lines. The illustration on page 62 shows the outcome of an hour's work by children of seven years.

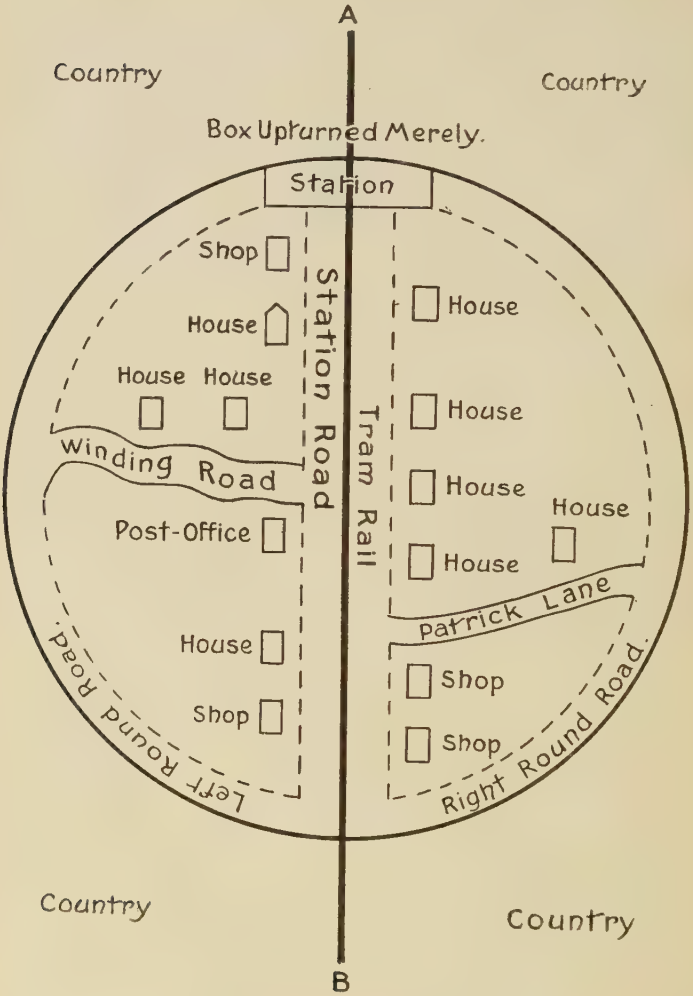
The Making of a Town.—The floor of the hall had a circle about 9 feet radius marked upon it, with the diameter also marked. We made use of these markings.

The preliminary considerations showed that it would not be convenient to build houses *anywhere*, but that the general scheme of the roads had better be shown first. The line already marked was the tram rail, and this ran straight to the station (an upturned box). Broad bands of chalk showed the width of this important road.

Houses and shops were built along on both sides, and trees stuck up in cotton reels at intervals.

The big pieces of waste land on both sides had to be used for "building purposes" now. So a road was rather waveringly drawn by a child through, at right angles to the wide road. Houses were built here, and also on the other side.

The children were asked to walk from certain houses to others across the circle, and the need of a new road was seen. A boy, Patrick by name, volunteered to make this.


A
Country
Country
Box Upturned Merely.
Station
Shop
House
House
House House
Winding Road
Post-Office
House
Shop
Station Road
Tram Rail
House
House
House
House
House
Patrick Lane
Shop
Shop
Left Round Road.
Right Round Road.
Country
Country
B

The children then stepped about in the city, going from house to house, to the shops and station.

Now a stranger came in by train, and wanted to reach a certain house. Who would direct him ? This gave the problem of naming the roads.

The children offered the local names, familiar to them, until it was pointed out that the best type of name is somewhat descriptive.

Station Road, was quickly forthcoming.

Right and Left Round Roads followed.

Out of the accident of shakey drawing came "Winding Road," and Patrick gave his name to the lane of his own making.

Directions now became easy, and it was a simple matter to direct the stranger one met in Left Round Road to the station, through Winding Road "and turn to the left at the end," or to the post-office "through Winding Road, and there it is on the right."

This was a first lesson, but the possibilities are many ; the necessity for the park, the fire station, the town hall, church, school, will all arise. The names of the streets may be printed on slips of cards, wedged into the split top of a fire stick ; lamp posts, pillar boxes, coffee stalls, tram shelters, can be made in handwork time.

The generous heaps of large building bricks accessible to all the workers offer fine possibilities for control. Zealous children help themselves too largely, and they gradually learn that it is *only in so far as they can use what they have, that it is lawfully theirs.*

Animals, trees, pointed roofs of bent cardboard, match-box trams, may further enrich the play.

Here are the beginnings of the appreciation of literature, the right naming of things ; the richer the descriptive power the more admirable the name ; the first suggestions of orientation, "In which direction shall I go?" The station stands in a certain relation to the house in Patrick Lane.

The free unrestricted movement of the children, the communal, yet individual work (for each child builds *his own house* in the town) forms a capital transition from the non-social play of the baby to the full community work of the older child.

Can one time-table this type of work under the heading of Geography, Handwork, Language Teaching, Moral Instruction, Hygiene, Civics, Geometry ?

Are not some of the richest lessons, brimming over with possibilities, those in which we follow the child's love of activity, of construction ? Is it not in the *experience of things* that we find the beginnings of what afterwards may be more clearly differentiated on the time-table as separate subjects ?

CHAPTER IV

HANDWORK IN THE CHILD'S OWN LIFE. TOYS

IN the Baby Room activity had very little permanent constructive quality; sand, bricks, clay, were played with happily enough for the joy they gave in manipulation.

This chapter deals with forms of activity in which constructive power is growing, and the difference of motive appears. We must meet the desire to make toys to play with, as well as purely representative things. Besides miniature carts and houses, we must make games, competitive in character, involving mathematical ideas, as dominoes, cards, draughts; of muscular dexterity, as skipping-ropes, tops, battledores and shuttlecocks, where the player has a keen appreciation of his neighbour's value.

Later, those objects, not to be classed as toys, but having a very real value in the growing child's life, and often taking the place of them, must be considered; the older boys' and girls' overflowing interests circle round butterfly nets, dipping pots, and seed cabinets; the needs of the prevalent hobby are too vital to be overlooked in the handwork hour.

Let us take toymaking first. Play develops in certain well-marked stages ; from the apparently aimless play of the baby, antisocial, through the social and "pretend plays," through the competitive games, leading on to the great community games, there is an infinite variety of activity. We must therefore expect toys to follow a certain sequence.

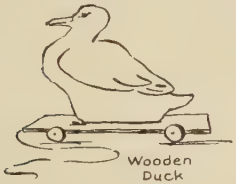
Superintendent Johnston has given us this very fully in "Education by Play and Games," and we tried to bring the handwork into line with his suggestions in that book.

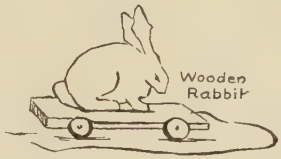
In *the Great Age of Imagination*—4 to 7 years—there is very little need for elaborate toys ; anything will do for the purpose of the game. Why should there be a *real* coach, when in a twinkling the wooden sugar-box can be turned into Cinderella's godmother's fairy coach, with gold trappings and velvet cushions. Imagination, one of the greatest gifts of the gods to men, is quite strong enough to meet the most exacting details. The wooden cask can change from the tea-table, when we pretend fathers and mothers, to the pulpit in the church, the raft, the sinking ship, from which we plunge to save our drowning comrades. R. L. Stevenson shows us the playing child of this period in his essay—"Child's Play."

The visitor to the nursery on a rainy day finds

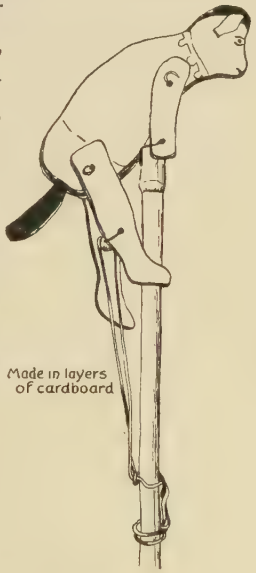
> "'A ship upon the stairs,
> All built of back bedroom chairs,'
> And it was 'full of sofa pillows,'
> To go a-sailing on the billows.'"

We remember how flowerpots, buttons, and pencils played the part of the children of a big family, in our own nursery days.





The playing stock of our Baby Rooms might then be largely provided by the Junior and Upper Schools. Bricks, sand, empty boxes, carts, wheeled platforms, jumping dolls, and animals on stands will keep them well employed.



But we remember another type of child, not so richly endowed with imaginative power; he makes himself *real* playthings.

A little story in "The House with the Golden Windows"[1] presents both to us.

"Once a child was sitting playing on a great log that lay by the roadside, and another came along and stopped to speak to him.

"'What are you doing?' asked the second child.

[1] By Laura Richards.

"'I am sailing to the South Seas,' replied the first, 'to get a cargo of monkeys, elephants' tusks, crystal balls as large as oranges. Come with me up here, and you may sail with me, if you like.'

'So the second child climbed on the log.

"'Look,' said the first child. 'See how the foam bubbles up before the ship, and trails and floats away behind. Look, the water is so clear, that we can see the fishes swimming about—blue, red, and green. There goes a parrot fish; my father told me about them. I should not wonder if we saw a whale in about a minute!'

"'What *are* you talking about?' asked the second child, peevishly. 'There is no water here, only grass, and, anyhow, this is nothing but a log; you can't reach islands in this way.'

"'But we *have* got to them,' cried the first child; 'we are at them now. I see the palm-trees waving, and white sands glittering. Look, there are the natives, gathering to welcome us on the beach. They have feather cloaks and necklaces, and anklets of copper, as red as gold; oh, and there is an elephant coming towards us.'

"'I should think you would be ashamed,' said the second child. 'That is Widow Slocum!'

"'*It's all the same!*' said the first child.

"Presently the second child got down from the log. 'I am going to play at stick knife,' he said; 'I don't see any sense in this. I think you are pretty

dull to play things that aren't really there'; and he walked slowly away.

"The first child looked after him a moment. 'I think *you* are pretty dull,' he said to himself, 'to see nothing but what is under your nose!' But he was too well-mannered to say this aloud, and having taken in his cargo he sailed for another port."

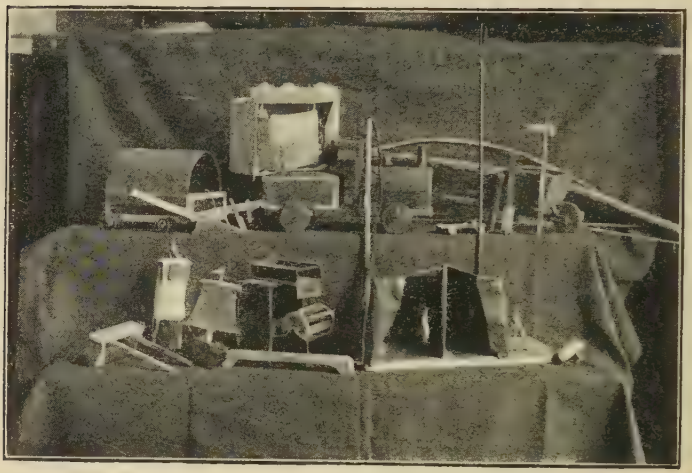
The Practical Age draws on, although pretence plays still persist. *In the period of 7 to 10 years*, there is a delight in mechanical toys. Many toys grow out of the "pretend" games of the earlier period; we get swords, shields, drums, etc. Constructive work is large and crude in character—the building of wigwams, tents, sheds, the making of sledges, wheelbarrows, water-mills, puppet-shows.

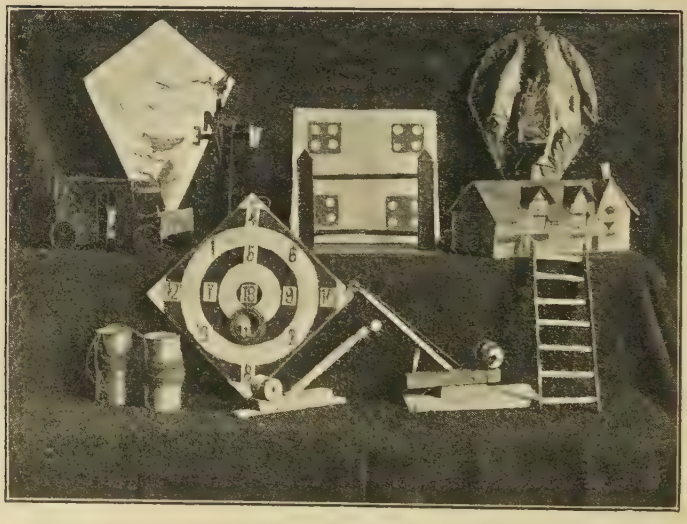
Another type of game yields opportunity for the making of draught-board, dominoes, printing-press, activities on the Sand Pile.

Illustrations (pp. 70, 71) show toys children have made either alone or with their teachers in class. The old cigar-box makes a fine body for the cart, cocoa-tins and string suffice for a telephone, a Quaker-oats box makes a capital waggon.

The Play Cupboard.—It is a good plan to make games and keep them in a play cupboard to be used on rainy days by the school, during the dinner hour or afternoon.

Here are some from our play cupboard. *Dominoes* made from thick white card and paint. The whole series of numbers must be carefully planned out. One





child may be responsible for the set bearing dots on one half only—and will make seven cards. Her neighbour, taking one spot throughout in place of nought, finds he has to provide only six cards, and so

on, until the child contributing six spots has only one domino to make.

Can these be equalised in any way? It may be suggested that couples may work together. Which people would make the best partners? It will be discovered that the child making *seven* and the other contributing *one* card will match another

couple who are working the set of cards containing *one* dot all the way down the half—and the set having *five* dots in the half.

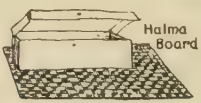
The class realises that $7 + 1 = 6 + 2 = 5 + 3$, and though this does not work out quite equally it gives good practice in the manipulation of figures in groups. The back of each card may be ornamented in different ways. Flat boxes may be made to keep them in, with the same decoration on the lid to differentiate from other packets.

A ludo board can be made; one boy may make this while another makes the counters of slices of cork with paper pasted over the top to keep distinctive sets; the dice being somewhat small and an essential being its perfect cubical measurements, it is wiser to supply this ready made.

A couple of draught boards are always useful, and no boy could carefully draw out the inch squares on well-bound boards without an appreciation of area, and the squares of simple numbers.

The counters can be cut from corks, or several circular discs of card glued together will give sufficient body to the counters.

Teetotums, targets, and quoits are shown in the groups of toys on pages 70 and 71.



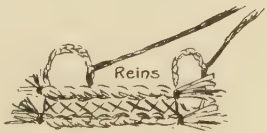
A halma board was easily planned out, the men

were made of wooden button moulds, with a match fastened into the hole, to form a handle.

Puzzles are kept in the play cupboard. One, of two luggage labels tied with blue and pink ribbon, is fun; the puzzle is to get them separate without undoing the ribbon.

Pictures can be mounted on cardboard and cut into separate pieces, the whole fitting into a rimmed tray. Other cards, mounted, are played as "Happy Family" and "Snap."

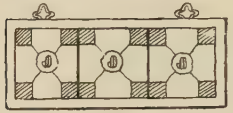
For those who are more actively inclined, reins and skipping-ropes made of bast, jumping figures of card and wood, bean bags, are kept.

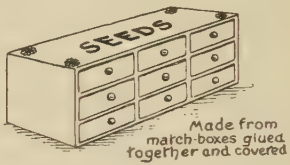


From 10 *to* 12 is a period of great physical activity, the collecting interest is seen. Handwork shows another type of apparatus—butterfly nets, hutches, balance toys as cranes, and see-saws, racing frogs, cupboards, pads, etc., for collections.

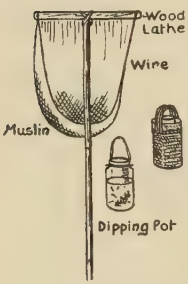
A chest for keeping seeds, or stamps, made of match

boxes, with buttons fitted on as handles is shown on this page, and two cranes on page 70.


Brass hooks mounted on cardboard



The pond dipping net is made from a long penny bamboo rod, with a lath fixed across at right angles at one end, and kept firm by strong wire arranged as shown in the drawing. A piece of old muslin is then fixed on to form the net. The jar can be prepared in a handwork lesson, with string handles, or a cane case with lids and strong handles may be made.



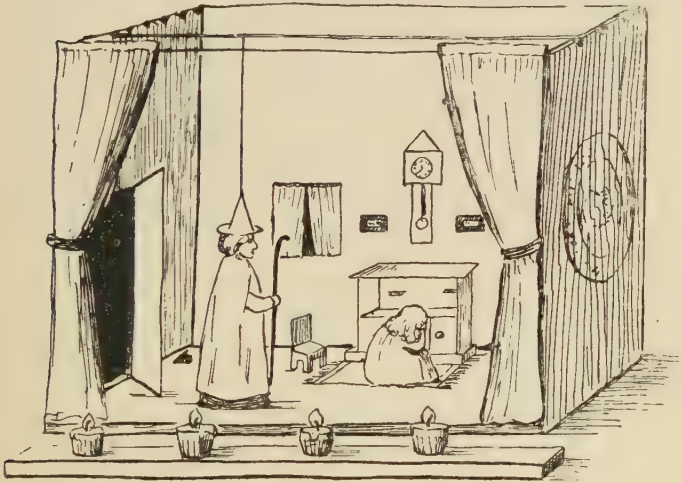
The racing frogs can be cut from very thick cardboard, crudely coloured, and the string attached through a hole in the head.

Racing Frog (in Cardboard)

"'Tis nothing but a magic shadow show
Play'd in a box."—
OMAR KHAYYAM.

In early days, we used to love to make of an old box and a few candle ends a puppet show. You invited your friends into a darkened nursery where the lighted row of foot lights on the nursery table was the only illumination. A

brilliant little scene was played by the entertainer, who stood behind the box, moving his figures by the wires along different rods arranged at the top. A running narrative broken by dialogue would be carried on either by a comrade, or if you were clever enough, by yourself as you bent above the box



A Puppet Show made by children from a Soap box

moving your puppets at will. You shared the same joy as the sick child in bed who as

> " The giant great and still,
> That sits upon the pillow hill,"

arranged his leaden soldiers in ordered rows, and sent his

> " ships in fleets,
> All up and down among the sheets."

There are several reasons why children should be encouraged to make toys in school time.

Home-made toys are not always the most satisfactory, for they are not made well enough, in many cases, to stand rough wear and tear. Here is the handwork teachers' opportunity.

Again, nearly all the dominating interests of the child should be met in school, if anywhere. All round progress can always be made along the line of interest, the betterment of the model with suggestions from the adult will yield practical ideas of general knowledge; the worker grows in power over his material.

The child, too, often has no place to make his toys at home, his "rubbish" is swept off the one table at meal times, and when there are mending and ironing to be done. He has no leisure, and no place of his own to think out his plan in material. The school is surely doing no mean thing in providing him with time, place, opportunity, to work out his will. The lad is the possessor of his toy in a far more real sense if he is the creator than if he is merely the buyer. We can help him to enter into the joy of such true possession.

POINTS OF INTEREST ARISING FROM EXHIBITION OF TOYS MADE BY CHILDREN.

1. The ingenuity of some of the toys leads one to question whether we are giving enough credit for intelligence in teaching generally. Are we proceeding

along the lines of interest, and keeping subject-matter in direct contact with life?

2. Certain toys were made for a definite purpose. A signal, to show a younger brother how the one passed on the way to school, worked. To make handwork effective either as subject or method, should it not arise from some necessity felt? Many match carts and match chests are meaningless, unless they take their place in definite group work—as furniture for house, specimen cases, models for sand tray, etc.

3. The toys freely made reveal the child's outlook on the world he tries to represent. There is often the attempt to represent a familiar object without realising the significant construction.[1] The water-wheel was so made that water could be poured through without the wheel moving. Is not this a lead for the handwork teacher?

4. Should there not be progression in toy-making? The second attempt at a table or motor-car must be better than the first. How can this be accomplished?

5. Children will copy each other's toys. How far may imitation be encouraged? Should the handwork teacher be content with this?

6. Should a place and time be found within the school hours for this interest?

7. The favourite toys (as far as one could judge) are those which admit of being played with, and not those simply representative in character, as on page 186 (typical model).

[1] Illustration at the top of page 70.

8. The weakness of the home-made toy is noted. Is not this the opportunity for a little technique?

9. What place does the working plan play in model-making?

CHAPTER V

DECORATIVE WORK—THE TEMPLE BEAUTIFUL. RHYTHMIC VALUES OF HANDWORK

"A thing of beauty is a joy for ever."—KEATS.

"Alas for that activity which is impatient of the end instead of rejoicing by the way!"—GOETHE.

"The entire object of true education is to make people not merely *do* the right thing, but *enjoy* the right thing."—RUSKIN.

"Give us to go blithely on our business all this day."—R. L. S.

A CHAPTER in the first section has already been given to the consideration of the worker as an Artist, and we have already been concerned with the part Design and Decoration may play in a happy life.

But this is a chapter of practice, and it must show some ways by which the double reason for introducing colour and pattern outside merely utilitarian purposes may be satisfied; for it is "no mean thing to make a useful thing beautiful"; and it is no mean thing to cultivate the spirit of appreciation.

The four quotations that head this chapter have a common strain singing through them—that of *Joy*.

There are certain seasons of the year when the pure delight in being alive encompasses us. In the first early spring days of sunny hours, and soft warm

air, breathing radiant promise for the morrow, it is well to *take time to Rejoice.*

The Spirit of Spring is with us, and walks our way through the woods if only we will saunter with her, and not try to meet a far less important engagement in the city. The birds' song and the green shimmer of long-tailed catkins will revive our work-a-day earnest-minded selves to a new life of greater values than those we have held steadily before us in the dark months of winter.

Even in the town, there are days when we go back a few steps to look again at the fruiterer's window where yellow tulips and crimson, golden daffodils and scarlet anemones are shining.

If the level-headed adult experiences this abounding joy in the mere beholding of beauty, in the being alive, what of our children, whose blood runs more quickly through the veins, and to whom this experience has not come so often?

It is enough to "enter His gates with thanksgiving." "It is a comely fashion to be glad, joy is the grace we say to God." He "marks the smiler in the street." Are we not concerned too much with the making of children happy? do we not spend too many hours trying to make things easy, too easy for them—while we spend little time in promoting joy? It is the all-pervading spirit of joy that is needed—it is to perform our duties "with laughter and kind faces," "let cheerfulness abound with industry." There is surely a difference between happiness and joy; even in days of

untoward events there may be abiding peace and joy deep below a ruffled surface. Gladness is more radiant than happiness, and springs from a deeper, purer source of being.

The school and the outside world are not so much in need of modern methods, of apparatus, even of insight and sympathy, as of the splendid benediction that the Spirit of Joy brings with her.

Those of us who work among children are too serious-minded; it is seen in the reasons we try to find for introducing subjects into the time-table. Handwork, the making of toys, coloured tops that spin, flicking brilliant coloured patches on the bare school floor, must be accounted for by showing the geometrical knowledge gained in the making of circular discs and coloured sections.

Stories may be allowed if they help to the power of consecutive thinking, if they give historical background, but what if they are given frankly for the "*joy* of the thing?" ["Pour rien, pour le plaisir."] Those choicest things we hold most precious in our own lives are those of which we could never set down the values in a cold-worded record. Does not Maurice Maeterlinck say the same thing to us in the "Life of the Bee"? "It is the habit we have of subordinating our wonder to accidents of origin or place, that so often causes us to lose the chance of deep admiration, which of all things in the world is the most helpful to us." If we still have so distorted a view of the values of life, that we still hesitate over the wisdom, nay, the

necessity of presenting for the mere sake of promoting *joy*, we may consider the tonic given to the physical system through it. The swift flow of the blood, the vigorous driving of the heart's action, the deep breathing, the clear vision, *the sparkle*, the buoyancy are apologies enough.

We can draw no line between physical, mental, and moral well-being. See Linnæus as he—

> "From his Northern clime
> Came in our spring's exciting prime
> To England's milder air;
> And as with joyous steps he trod
> Her widespread down's elastic sod,
> He saw a sight so fair,
> That on his knees he thanked the Lord for giving
> Such glory to the earth, and to the living."

There can be no greater tragedy than that of the sad ascetic—

> "The narrow thorny path, he trod.
> 'Enter into My joy,' said God;
> The sad ascetic shook his head,
> 'I've lost all taste for joy,' he said."

It is well to read again the "Crown of Wild Olive," and realise how Ruskin identifies taste and morality:

"Tell me what a man *likes*, and I will tell you what he *is*."

"The knowledge of what is beautiful leads on, and is the first step, to the knowledge of the things which are lovely, and of good report; and the laws, the life, and the joy of beauty in the material world of God are as eternal and sacred parts of His creation as, in

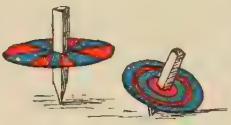
the world of spirits, virtue, and, in the world of angels, praise."

In the words of the Shorter Catechism, "Man's chief end is to glorify God, and to enjoy Him for ever." The joyous commentary upon it given to a little girl, sings with the note set by the word "enjoy."

"It means, that man in himself is a gey poor soul, no' worth a pin, though he's apt to think the world was made for his personal satisfaction. At the best he's but an instrument—a harp of a thousand strings God bends to hear in His leisure. He made that harp—the heart and mind of man—when He was in a happy hour. Strings hale, and strings broken, strings slack or tight, there are all kinds of them; the best we can do's to be taut and trembling for the gladness of God who loves fine music, and set the stars themselves to singing from the very day He put them birling in the void. To glorify's to wonder and adore, and who keeps the wondering humble heart, the adoring eye, is to God pleasing exceedingly. Sing, lassie, sing, sing, sing, inside ye, even if ye are as timmer as a cask. God knows I have not much of a voice myself, but I'm full of nobler airs than ever crossed my rusty thrapple. To be grateful always, and glad things are no worse, is a good song to start the morning."

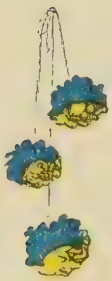
And there comes from the Samoan household, where the Scotch custom of prayers morning and night is kept, the same joyous note. "Give us to go blithely on our business all this day." "Give us courage and gaiety and the quiet mind." "Call us

up with morning faces and with morning hearts—eager to labour—eager to be happy, if happiness be our portion." "Give us health, food, bright weather, and light hearts." And that prayer full of sunshine and radiant beauty, "Give us to awake with smiles, give us to labour smiling. And as the sun returns in the east, so let our patience be renewed with dawn; as the sun lightens the world, so let our loving-kindness make bright this house of our habitation."



(i) Colour.

The child's abounding delight in colour and sound offers fine scope for promoting joy.



It is interesting to compare the adult's and the child's standards of beauty. The child loves heartily bright, crude, vivid, clear, pure colours; the soft, undetermined art shades do not seem worthy of admiration. Let him, then, make spinning-tops of gay, pure red, blue and yellow sections. Give him *time in the class-room to spin them on the floor.*

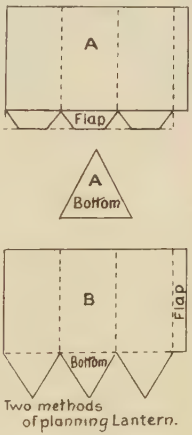
Here is a little scene which happened on my rounds with an inspector.

The III. Standard class-room had no blots of vivid

colour, the windows were too high for the children to look out from the joyless room, but they were colouring circular discs for spinning.

Soon we were all twirling the little toys round, and rejoicing in the rhythmic movement, and merging of colour. "My colours have gone!" —"Mine's grey, mine's turned white," and "Oh, my stick is rainbow, is rainbow, and pretty colours are dancing on the top of the stick!"

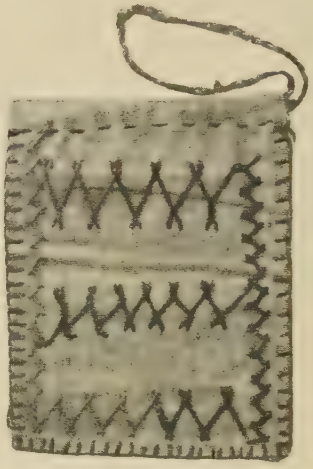
We did not stop to consider laws of refraction, of light, of velocity, of balance, we rejoiced, man, women, and children in simple colours spinning on the bare floor.



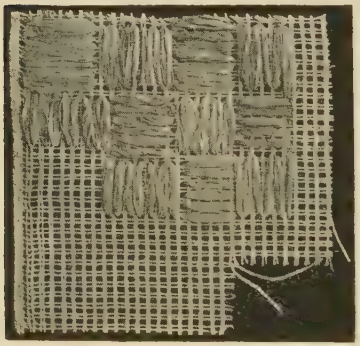
Two methods of planning Lantern.

The coloured lanterns, gay with simple washes of pure primary colours, running together on the rough paper, the dainty little tissue paper serviettes decorated in orange and vivid green chalk, the bright paper balls strung with silver tinsel, made by the Babies, and offered to every class-room as a decoration, are among the ways in which to promote joy in colour.

The gay flourishing thread, D.M.C. cotton, the

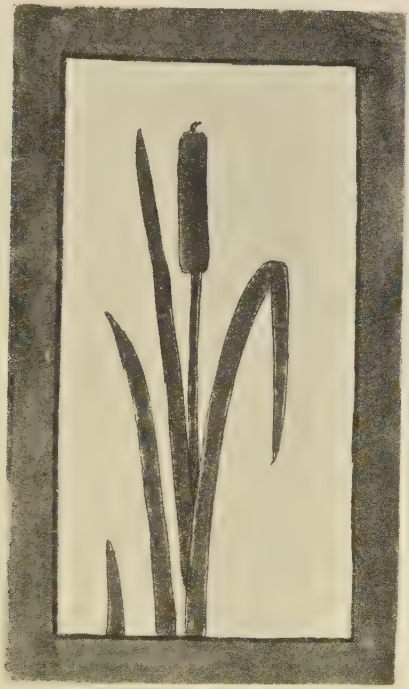


tinted linens and coloured prints have already taken the place of white calico and cotton for the sewing. The big, bold decorative stitch is seen on the bags in the illustrations.



It is interesting to allow children to mount their own brushwork pages. A thin line of green or brown leads pleasantly on from the centre of the bulrush to the border—a light wash may be used, or a border of another *paper*.

We have given pictures of decided colouring to be mounted by the children, and have hung a scale



of colours taken from any good wallpaper book, in the room, to help them.

Dr. Stanley Hall has much interesting matter in "Studies of Childhood" upon the question of children's taste. It is wise for the range of colours given by the teacher to contain no clashes. So that although the child has the opportunity of choosing a companion

colour to his crimson, he has no temptation to incline to scarlet (there is no scarlet in the range), he may choose green, or brown, or grey.

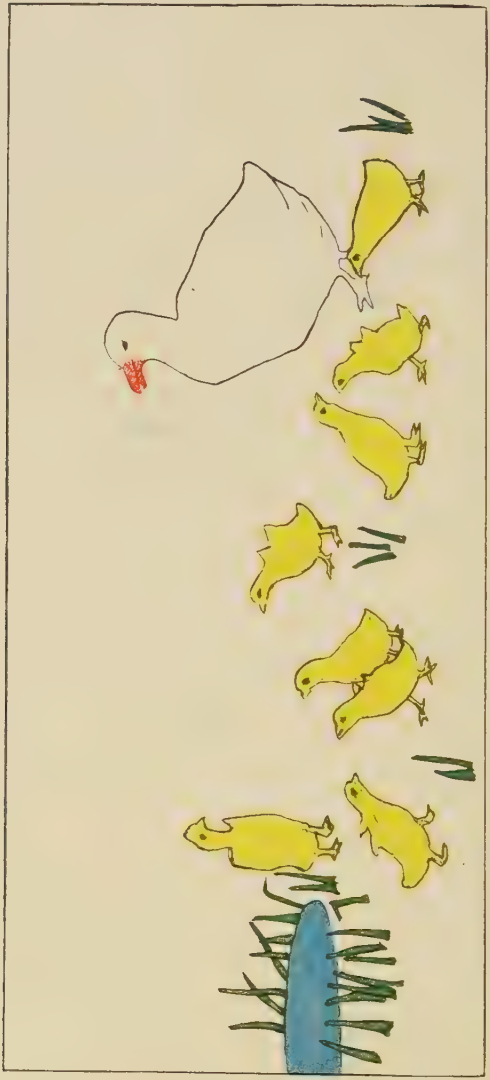
With older children the colours may be characterised as cold and warm tints, and modulations made. Now and then a picture showing three or more decided colours may be given, the children try to get this wash on their page at the side, and then tint in one of their ordinary drawings, using the same colours. Another time the children are invited to bring pieces of fabric, and these are mounted on the card, which is then used to wash similar tints on. The purple of velvet, of silk, of flower petal are quite interesting to attempt to catch.

But these are, after all, merely exercises in technique, and we found it unwise to indulge too frequently in them.

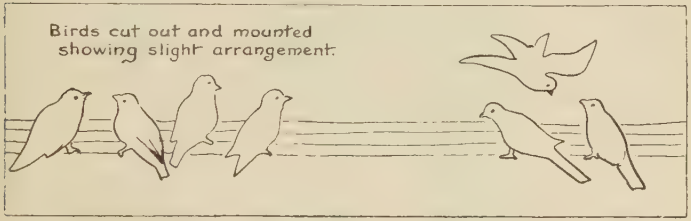
(ii) The Making of Pictures in Paper, leading on to Conventional Design.

The child's joy should not stop at making things for himself alone; joy radiates, and kindles the neighbour too; the wider it spreads the deeper it glows. Social service in the form of decorating the schoolroom has a place. Gay paper lanterns may be made.

In the Babies' Room large free cutting pictures may be attempted. The two farm scenes below are illustrations. There is no attempt at design, of course,



yet—there is no formal arrangement—the picture is satisfactory so far as there is a hen of ample proportions and many chicks.



Later we attempted some little arrangement of order. The girls in the orchard picking apples illustrate this, the stooping figures come to break the line of stretching children.

The group of boys in the wood with their red caps is another example. The delightful friezes of Cecil Aldin and John Harsall are full of suggestion. Wall-paper shops will often kindly give some small copies away. Later, we conventionalise a little; the design for a cushion is sketched out by paper cutting. The owl is satisfactorily placed in the centre, the branching background shows symmetry and good balance, yet one side is not identical with the other.

Some specimens of Japanese art may be shown, showing the satisfaction that repetition gives, yet though each element returns, there is no monotony, for it is generally slightly altered, giving a pleasurable expectation. This is a secret of delight in *handmade* designs above the stencil plate and machine-made patterns, the same element returns to give a sense

Boys cut out, coloured and arranged with idea of spacing.

Paper-cutting, showing idea of repetition in design.

of satisfaction, but, slightly altered, it becomes fascinatingly individual.

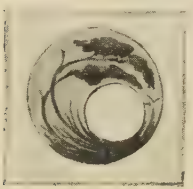
A further essay in design may be arranged by allowing the children to bring boxes, book covers, and blotters. These can be covered with "all-over" wall-paper, and a design cut out perhaps, in several parts, of a harmonising colour and mounted. The illustrations show some ways in which we have done this kind of work.[1]

We found that through having the *elements* already there, the children could more readily apply themselves to the arrangement. They had scope for adapting, patching, balancing, and finally the colour

[1] The coloured frontispiece shows these illustrations.

teaching was very valuable, because the designers had first merely to hold their centre to the various all-over pages to see the effect, before they ultimately worked the whole design out.

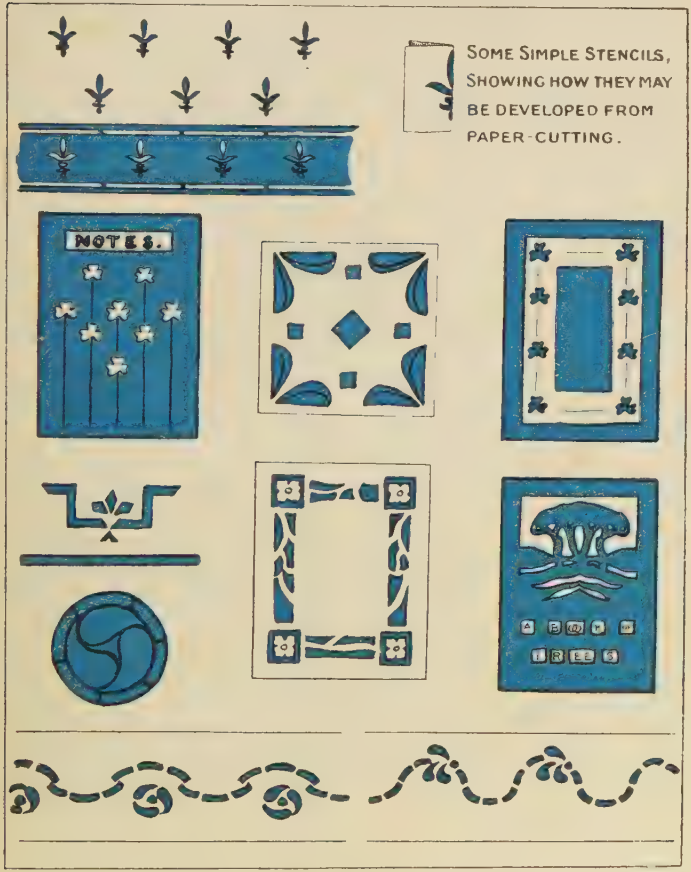
Some interesting work may be attempted by using a few elements, and adapting them to fill different spaces. The illustration below shows brushwork designs for glove and handkerchief boxes.



The teachers in charge of this type of work were helped very largely by reading concurrently with the schoolroom work Ruskin's thoughts on Art, and just immediately, Yoshio Markino offers much thought-provoking suggestion.

The Stencil Work.—In a general scheme of colour work and drawing, the question of decoration is approached, leading on to various ways of reproducing the same element; stamped fabrics, prints, wall-paper designs are shown, and the principle of the stencil

plate, after having been illustrated, is more fully



SOME SIMPLE STENCILS, SHOWING HOW THEY MAY BE DEVELOPED FROM PAPER-CUTTING.

explained. This leads to the children's essay to produce very simple plates, in stiff paper, daubing bright colour through the spaces.

The need of the "ties" soon arises; this is faced by the class as a whole, and overcome by fresh examination of plenty of good stencil designs and plates. The children try again. They bring butter muslin, scarf ends, strips of cloth for borders; the boys are generally as ready as the girls to decorate; the

edging for time-tables, programmes, may be given them, while the girls are working on their scarves and handkerchiefs.

Now, the suggestion comes that as this knowledge is held by this school class alone it shall be the contribution to the general house scheme, and certain of the class shall design and stencil borders for table-

cloth and curtains, after the little ones have stitched the hems down in big, bright-coloured stitches. The interests of the little child are considered carefully by these older children, and certain boys and girls are chosen by the children themselves to carry out the ideas suggested and voted upon.

(iii) The Rhythmic Value.

It is not only in its stimulating character that the child needs handwork in his life; the restful element should be provided too, and although this

is particularly important for a certain type of child, it is necessary for all to have a period when quiet rhythmic activity is presented.

The rhythmic movements of weaving, plaiting, certain kinds of sewing and knitting, planing and

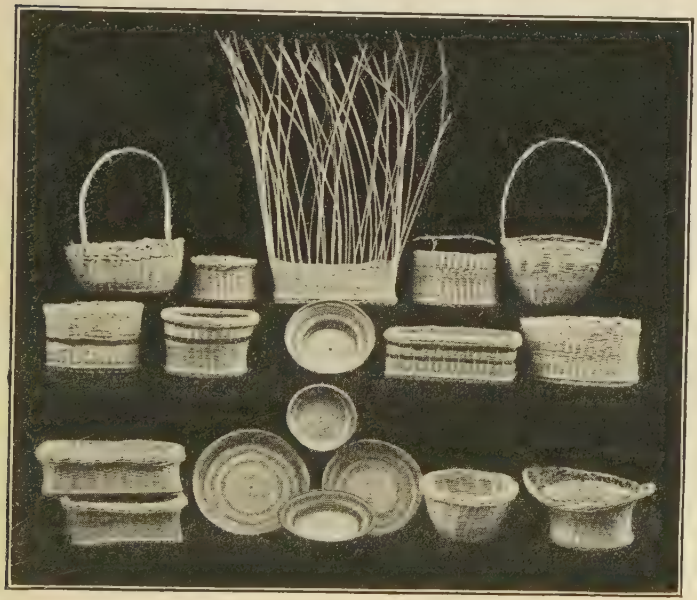
sawing are very beneficial for the excitable twentieth-century child, and tend to keep the balance he so sorely needs.

Councillor Bray has written of the noisy, turbulent, homeless life of the Camberwell Council School child ;[1] doctors are constantly deploring the neurotic child of wealthier parents, and to give quiet rhythmic movements of the hands, in the open air, by means of this type of

work, helps much to promote balance. Interest in the growing basket or fabric, choice in colour or design, but without undue elaboration in planning after the initial start, joy and pride in final achievement, are no mean elements to build into the characters of these unstable children, for whom *rest* is an essential part of each day.

[1] "The Town Child," by Councillor Bray.

This type of work is shown on pages 97, 98, 99. Weaving, spinning, and knitting may be taken out of doors, the children can sing, talk, or read aloud as they work ; the teachers who have taken their children to this kind of quiet work, with its simple easy discipline,



know the valuable social element that immediately makes itself felt.

Here each child works quietly on at his own speed, and has not to strain and make undue effort to keep up with the others, yet the interest in his work (if it be properly chosen) will be enough to keep him from idling.

There is no reason why some children, showing the neurotics' hand in the general school, should not more often have this rhythmic type of work: while their normal schoolfellows work out the plan of the photo frame, calculating the necessary measurements, etc., the neurotic child may be allowed to work quietly at his basket or knitting. To keep some kind of this work at hand to give whenever suitable may often ward off an irritable nerve storm. There is a growing satisfaction in a returning harmony as the worker once more comes to himself, largely helped by the rhythmic action of the hands.

In adult life, a long, quiet afternoon of sewing, a fragrant evening in the garden leisurely cutting the grass is perhaps the equivalent to the adult of the more peaceful, non-stimulating, but healthful type of handwork, mainly rhythmic in character, which we must keep carefully in the child's life.

CHAPTER VI

SOCIAL SERVICE AND GROUP WORK

"They helped every man his neighbour."—Isaiah xli. 6

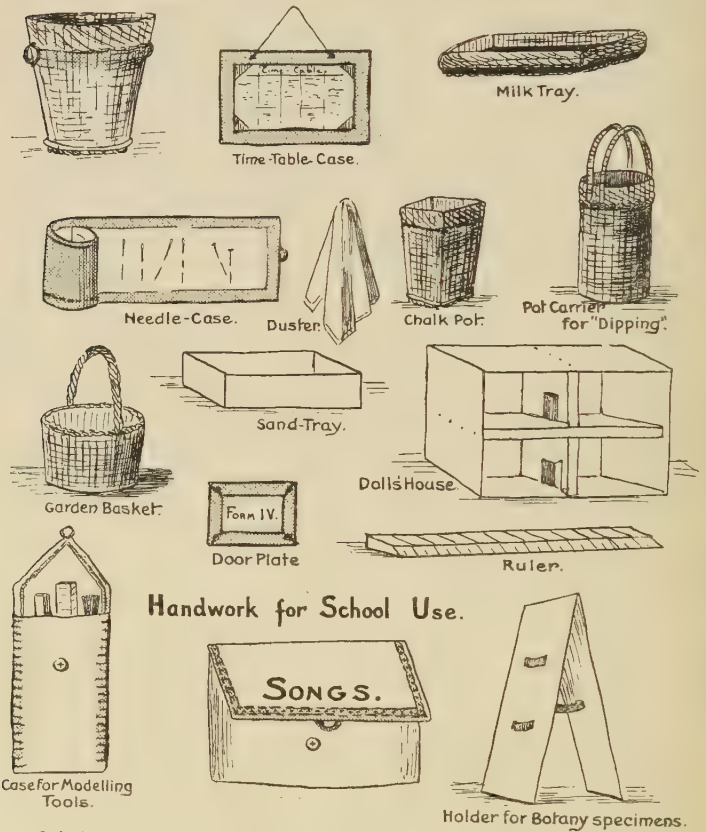
"IN real life, society at its best organises itself into groups in which every individual, in the various groups to which he may belong, finds himself in contact with others whose weaknesses he supplements, or whose greater powers he depends upon. . . . 'If the school is to prepare for society, as it is, it would be natural to expect that some such form of social activity, however embryonic, should be found as a necessary feature of its life.'"[1]

The greater part of the school's activities appeal to the child as an isolated individual; he works for himself, even in his relations to his fellows he is competitive, and is not allowed to help his neighbour.

Group work balances this. There is the free interchange of ideas, the loyal throwing in of his best work to the general good; a spirit of comradeship, loyalty, *esprit de corps* is engendered. The boy feels himself a member of society, working in a

[1] "Social Education," by C. A. Scott, published by Ginn and Co. This book suggests many types of group work suitable for Junior and Upper Forms.

common spirit towards a common end; steadiness of purpose grows as the group bond increases in strength. He nominates certain leaders, and agrees to division



of labour, his judgment in reading the characters of his fellows finds scope, a sense of responsibility is engendered. The success or failure of the scheme

does not rest with the teacher, but with the group of workers. It is well that the individual should sometimes combine in a unity of service with his fellows.

This chapter shows four ways in which we have tried to appeal to the social interest :—

(i) The children make individual things to be given into the school stock.

(ii) Group work in connection with large illustrative models.

(iii) Bookbinding and mending.

(iv) A centre of general interest is provided, and all classes contribute ; in our case a children's house proves full of possibilities.

Of course many other interests are ready for this adventure : gardening, the making and care of an aquarium, the housing and care of animals ; but whatever form be taken, there must be real love of the activity behind, for social service involves a very real "give-and-take," and disinterested love must be strong enough to bear this daily test.

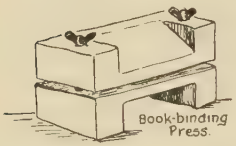
We found the boys and girls of the Middle and Upper School, very ready to respond to the suggestion that they should make something for the school. The school has done so much for them, and it is quite simple to provoke the wish to show gratitude in some way.

(i) Objects made by Individuals and presented to the School for General Use.

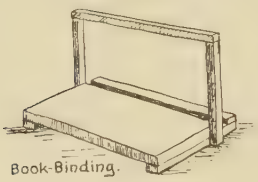
The illustrations on page 102 will show suggestive sketches of things we have really done.

Waste-paper baskets and trays, pot carriers for each room, from the cane work class, time-table, nature calendars, door plates in card or wood; sand trays of wood with zinc bottom, garden baskets of thin wood shavings, dusters, needle cases and folios of strong cheap fabric, boldly decorated with stencil patterns or bright thread, are among the many objects possible to make.

The bookbinding, which is a most useful form of social service, must have certain apparatus to make it a practicable school craft.



The wooden press, with two iron bed screws (9*d.* a pair) is within the scope of the boy worker in the wood shop. The sewing frame is very simple, and it is interesting to reduce this to the barest limit, a wooden platform slightly raised, and uprights joined by a horizontal bar. Some boys fret-work the strip in front, others add a strip of wood to the body of the frame.

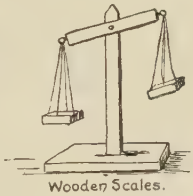


Sewing Press.

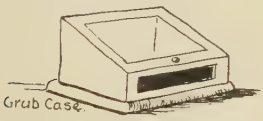
Some, with an eye to carrying the frame through

the streets, arrange for the uprights to fit into holes, so that it may shut up flat; others use a hinge and peg.

The wooden scales are useful in the babies' sand tray, and in the kitchen when the measure runs in terms of "the weight of two eggs in flour."


Wooden Scales.

The grub case has a perforated zinc panel let in for air, and the top may be made more simply than the glass lid hinged to the back, by making a wooden ledge in front for a loose piece of glass to rest upon.


Grub Case.

Weaving Frame.

The weaving frame is used by the little ones in making carpets for their doll's house.

(ii) Group Work in Connection with Illustrative Models.

Another type of group work is to decide on a scene and make certain leaders responsible for certain parts of it; the separate objects being made to scale are grouped round one central one. We have worked out farm yard schemes, a street, a village, a doll's house, very simply with the little ones, and more elaborately with the older children.

This group showing a farm house, a Dutch barn, the sheds, a mill, a granary, was worked out by

teachers at a Scarborough summer course; and I am indebted to the instructor, Mr. Robinson, for the photograph and permission to use it.

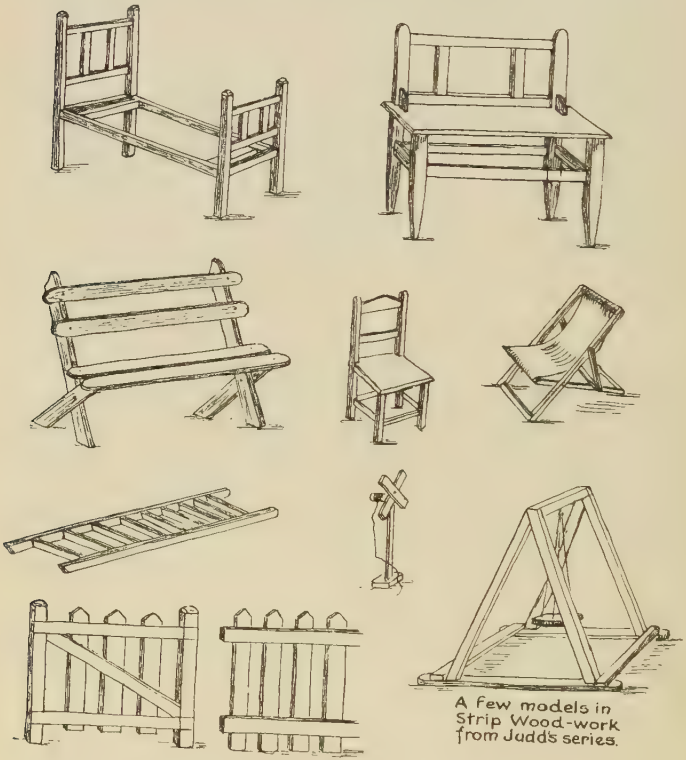
This is a set of houses, tower, and cottages bought in sheets at Liberty's, which were cut out and fastened

together. New ideas of construction were gained, but there was only a very limited value we thought in this exercise. The group of models, however, was continuously useful in the sand tray, and in constructing villages, parks, streets, etc., on the floor.

The doll's house scheme is so familiar that it will need very little description here.

Wallpaper books, to be had for the asking at house decorators', are most useful. Old cupboards, boxes, etc., may be utilised, and furnished with modifications of the type model for the junior children. If the scheme is worked by the older boys and girls most of the furniture can be made in strip work—light wood

work. The illustration shows some models made from Mr. Judd's book, under the supervision of Mr. Colburn, instructor in wood work at the Technical Department of the University, Sheffield.



A few models in Strip Wood-work from Judd's series.

Our doll's house was adapted from an old wardrobe, it had four good rooms, and stairs, the front with windows was fastened, and the back was left entirely

open. We made a garden in front, by fastening several planks of wood together, and covering with sand. The deck chair, garden seat, swing, fences, and gate were played with here, and garden beds and paths schemed.

Larger models of the bed, chair, and sideboard were made for the house scheme mentioned elsewhere. The family of dolls has unfortunately been omitted from the photograph, but these again formed a centre of interest to the girls.

The outfit for each worker amounts to *7s. 6d.* Each needs a small saw, a hammer, ruler.

The doll's house measured about 4 feet by 3 feet by $2\frac{1}{2}$ feet high, and was found to be a convenient size for papering, making of furniture, etc.

(iii) The Care of Books. Bookbinding and Mending.

We have found that bookbinding is an increasingly satisfactory means of social service for the older children. The best way to start is to get a few lessons with a local bookbinder; there are many very simple little things to be learnt which can only be appreciated in the workshop, small hints given by a true craftsman which can only be given at the bench, and cannot be communicated otherwise. The Artistic Crafts series of technical handwork has a delightful book "Bookbinding," by D. Cockerell, and this should always be in constant use in the bookbinding

room. There should be plenty of room to move about. The photograph below of the older children at the Open Air School, Whiteley Wood, Sheffield (lent by the kindness of the head mistress, Miss Lee), shows almost ideal conditions for the simpler stages. On a breezy day the open air, of course, is not an

advantage to a worker in paper and flimsy material. These children not only rebind old books, but bind strongly some of the penny Books for the Bairns, and make up address books, note books, and little scrap books and albums.

The Old Books.

The books—Readers and Poetry Books—are at last worn out, and have to be thrown out of stock

before new ones are allowed. There is the chance for the Handwork class again.

We can often arrange to take out a single story, or all the poems may be sorted out and put together; these make up into quite handable books for group-reading, at any rate.

Little booklets can be made by children of the IV. Standard in a one-hour lesson. The material need not cost the school anything, as the covers are satisfactorily made of rejected covers of drawing and writing books.

The School Music can also be kept thoroughly in repair.

(iv) The Children's House Scheme.

Our fourth essay in promoting the social service of the school was that in which we provided a common centre of interest, and asked all the classes of the school, from the Babies to Standard VII. to contribute. The account of this will form the remaining part of the chapter.

"I never had any other desire so strong and so like to covetousness as that which I have had always that I might be Master at last of a small house" [Cowley], and as his sentiment is fairly universal we chose *a house* for the centre of interest.

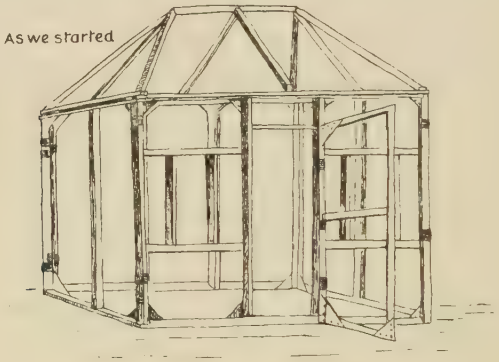
The Children's House.

Simultaneously with the ordinary class work, another scheme was run. A large house measuring

5½ feet length of frontage, 4½ feet in height, 4 feet deep, and 1½ feet the perpendicular height of roof on the walls, was made by the carpenter for 10*s*.

The four sides could be folded together as a screen, and the roof could be taken off. The front showed two windows, one on each side of the door. No glass was put in, and the whole thing was simply a skeleton house.

It was to be the property of the Infants and Junior School, and children of 4, 5, and 6 years could step in



and out, sit at the tables, keep real little clay cups in the real cupboards, sweep with a real broom, and generally play family life to their own size.

The filling in of walls, covering of roof, furnishing of room, etc., was to be the work of the whole school.

Every standard took a pride in contributing something. Those having little handwork on their time-table, offered brushwork and drawings for the others to mount as pictures. The picture on this page shows the house at the beginning; and the coloured plate,

opposite page 117, the house after we had finished the work.

The scheme worked out as follows :—

Standards V., VI., VII.—The furniture—cupboards, etc.—light woodwork and ordinary woodwork. Designs for papers, stencils.

Standards IV., V.—Fixing of walls, roof, chimney, fireplace. Designs for curtains, etc.

Standards III., II.—Pottery (cups, plates, jars—burnt in kiln). Clock-faces ; one to be fitted into body of clock made by Standard II.

Standard IV.—Pictures (brushwork of Standard VII.) and others mounted.

Standards II., I.—Weaving, carpets, rugs, curtains, bed-clothes, table-cloths, etc., made with big stitches in coloured thread. Three handwork hours out of the term were enough for each boy and girl to contribute to the above scheme. It ran simultaneously with more ordered courses, and did not in any way overbalance other interests.

Filling in the framework and marking in the walls occupied the first handwork hours. Sheets of cardboard were fitted to the outside of the frame to represent brick walls. Boys of Standard IV. undertook this.

There were some questions arising throughout the first hours of work. They will perhaps show better than any writing how wide an interest, and practical a knowledge is stimulated by this free form of activity.

How can the cardboard be best arranged to cover

the back and sides? How many sheets will be needed?

Discussion of marking Bricks.—What is the measure of an ordinary brick? Is there a standard brick? Shall we adopt it or reduce, as the house is so small? What proportion shall we adopt? How many bricks of the accepted size should you estimate to one sheet of cardboard? We will see who has given the best estimate later.

Marking out the Bricks.—Preliminary markings with chalk. What can we use instead of 12 inch ruler which does not serve the purpose of a ruler, though it will be wanted for a measure? How can we arrange the unused sheets of cards to keep the lines true?

Are bricks arranged in straight lines—horizontally? vertically? Do the first and third lines horizontally correspond or not? Always? What proportion of thickness shall we leave to represent the mortar?

Will the walls rise straight from the ground, or shall they have a border? Does any concrete show? Is that essential? Whose estimate is nearest?

Roughly approximate the bricks needed to cover the space below the windows in front.

Consider the question of painting the bricks and mortar for next week, and how the gutters can be made. We will make rough sketches of houses, walls, roofs we think may help us in our work, and consult them from time to time.

The colouring of the Walls.—One boy experimented with distemper, 1 lb. ochre and 1 lb. a red brown, ½ lb.

size, and a quart of hot water; after several brushings he called the class to decide, which they did by vote. A record of the quantities of ingredients was carefully made and kept.

The marking for the mortar meant a good deal of trouble, and about six boys experimented as they thought best. Yellow chalk was too yellow, white, too clean, black charcoal was too dark. A rub of white chalk and black charcoal solved the difficulty, and the double marking was adopted.

But, true to one of the laws of life, a new and far more successful effect was gained *by accident.* A boy smudging his thumb along the mortar line merged the black and white, making a very happy shading. At last each *boy's card showed the accumulated wisdom won by the experience of many boys.*

As this hour had been spent in bold, quick, rough work, where there was very little need for accuracy, a balance was given by the suggestion that the space above the door should be measured, and well-spaced printing should be done, of the name of the house.

The Naming of the House.—"The Elms," "The Avenue," "The Manor House," "Houghton Villa, because my father once had a house called that," "Glen View," were among the eagerly suggested names.

We discussed the purpose of naming—the descriptive quality involved in many names, and consequently most of the first suggestions were willingly abandoned. House, Lodge, Villa, still seemed to be the only words within the children's reach. "This

very simple house has only one room, the front door opens straight into it, the furniture is a bed, a table, some chairs, and a cupboard!" "Cottage," "cot," "cabin," now came.

And finally a few names were put up to be voted upon by all the contributors later—"Baby Cottage," "Nether-Green Cabin," "Ranmoor Cottage," "The Children's House," were among those put up for nomination.

The Roofing was constructed on somewhat similar lines.

A new set of boys came.

They were shown the house, the problem of roofing presented. Sketches of various roofs were made, discussed, and then one adopted. This was represented on the straw boards, and tacked on to the framework.

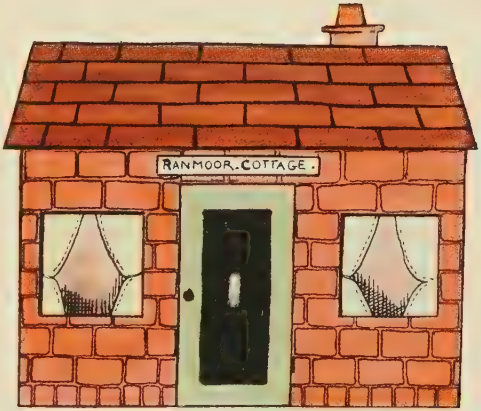
As the house had to depend on the two small windows in front for *light*, a good-sized skylight was left to let in more.

Many questions were asked—Why do some people use tiles, others slates, others thatch? What advantages have some of these over others? What proportion of tile overlaps? Is this uniform? What is the point of tiles overlapping at all? The construction of the gutters took time, the connection with the water-pipe, etc.

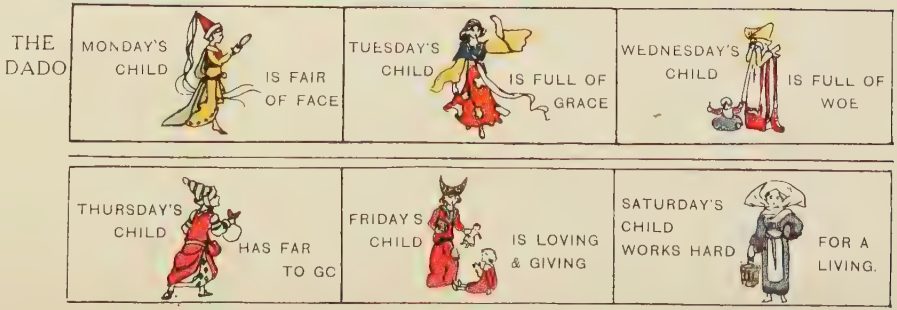
At last the outside was finished.

The Inside.—New straw boards were measured and tacked to the walls.

Girls and boys in the top classes were responsible



THE HOUSE


THE DADO
MONDAY'S CHILD IS FAIR OF FACE
TUESDAY'S CHILD IS FULL OF GRACE
WEDNESDAY'S CHILD IS FULL OF WOE
THURSDAY'S CHILD HAS FAR TO GO
FRIDAY'S CHILD IS LOVING & GIVING
SATURDAY'S CHILD WORKS HARD FOR A LIVING.

The figures are adapted from A. L. Bowley's sheets, which appeared in connection with the Magazine : "Home Art Work."

for the decoration. They gave up their drawing and brushwork lessons to the scheme. The dado on the coloured plate opposite shows this.

They considered the interests of the five-year-old child, and decided on bright pure colours in the illustration of nursery rhymes.

The ten-inch dado showed the seven children of the week dancing in line. These were repeated three times, each boy or girl taking one figure.

"Monday's child is fair of face,
Tuesday's child is full of grace,
Wednesday's child is loving and giving,
Thursday's child works hard for a living.
Friday's child is full of woe,
Saturday's child has far to go.
The child that is born on the Sabbath day
Is blithe and happy and good and gay."

The plain paper below has little trails of flowers down to show the four seasons of the year.

Spring has delicate little snowdrops hanging in thin lines from dado to floor.

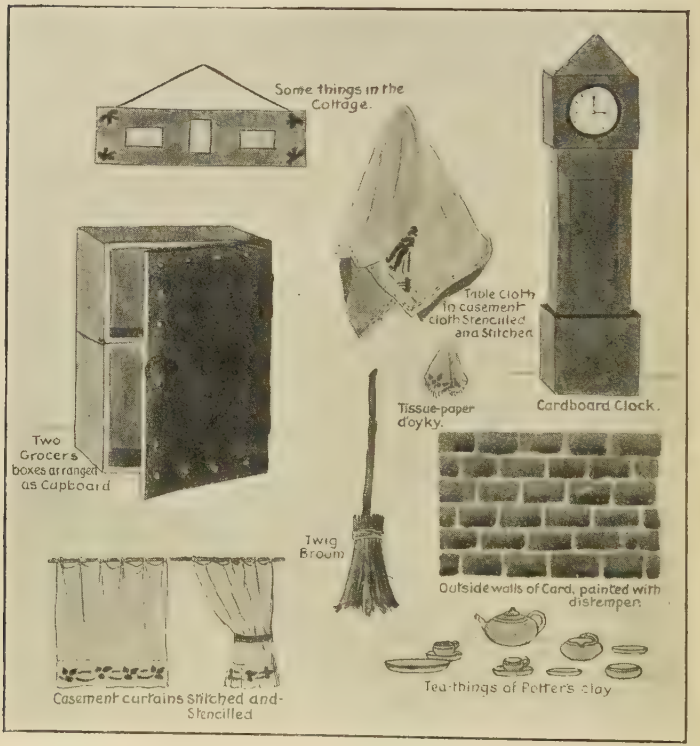
Summer.—The wild rose, quite shy and beautifully pink, strays with buttercup and daisy chains, down the paper.

Autumn.—The crisp blackberry leaves, with rich splashes of russet, crimson, and gold, straggle in prickly trails, with their strong thorns red-based against the brown stems.

Winter shows the glossy holly with its scarlet berries, stiff and prickly, making Christmas cheer, to end the year!

A few Notes on the Things in the Cottage.

The illustrations show some of the things made by the school for Ranmoor Cottage.


Some things in the Cottage.
Table cloth in casement cloth Stencilled and Stitched
Cardboard Clock.
Tissue-paper doyky.
Two Grocers boxes arranged as Cupboard
Twig Broom
Outside walls of Card, painted with distemper.
Casement curtains Stitched and Stencilled
Tea-things of Potter's clay

The Grandfather's Clock.—Clock-faces were made by the whole of Standard III., and a few of the clearest were chosen to finally select from. The majority of

the class were quite happy to take their clock-faces home, and felt the reflected honour of the more favoured givers who left theirs for the good of the scheme. We found continually what a naturally good way this was of bringing home to the children the practical desirability of turning out clear, honest work of the highest level possible to them.

The case was made by six boys independently of the class work. They knew how to make boxes, and after discussion with the whole class upon the construction, the following method was decided upon.

Make the clock in three parts.

Two large cubes, measuring 9 inches, and one oblong prism measuring 14 × 8 × 8 inches.

Straw board was the chosen material.

It is good to allow the class to nominate the workers. Boys and girls have a fairly high standard, and quickly learn to appreciate a good workman, and being themselves his comrades in work, they appreciate the overcoming of difficulties which have confronted them at the same time.

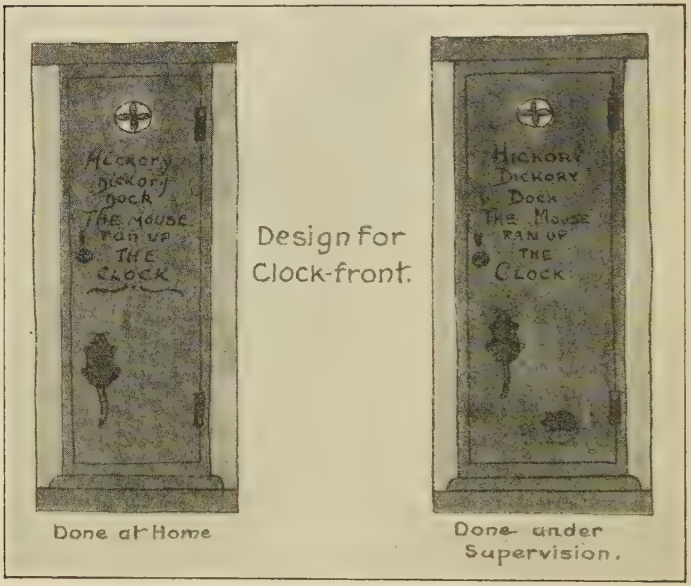
The top triangle is adapted from the fastening flap.

Another class was responsible for the decoration of the panel.

Their teacher gave them measurements, and discussed the type of decoration suitable for a clock standing in a little children's room. Nursery rhymes seemed appropriate, and they quickly decided on illustrating "Dickory Dickory Dock." The rest was kept a dead secret both from the teacher and

between the children themselves. They worked the design at home, and a time limit was set. They asked for an extra week, "as the bevelling of the edges takes so much time," and expectation reached a high level when we heard that some were working in wood.

The class readily responded, and put their whole


Hickory Dickory Dock The Mouse ran up the Clock
Design for Clock-front.
Hickory Dickory Dock The Mouse ran up the Clock
Done at Home
Done under Supervision.

hearts into the work, because they realised that the design was to be immediately applied, and it was for "the little ones"—a beautiful key always able to unlock the best efforts of every kind of older boy and girl.

The design chosen was done on paper varnished

and stained a good rich brown. The mouse and words were cut out in white paper and mounted. The boy who did this offered to varnish the whole clock and fasten his panel on with bright-headed drawing pins. He gave up some of his dinner-hour to this for several days, and the result was very pleasing.

The illustration is on page 120.

A little opportunity for technique offered, on the subject of printing. The boy realised that he had adopted several styles of lettering, and this was remedied by the loan of a good printing book.

The Pictures.—The six pictures published as frontispieces to the Golden-Stairway-Poetry series were carefully cut out and used. Three were given to a girl of ten, after the whole class had had a couple of lessons on mounting single pictures for themselves.

The three were to be mounted in a row. A large sheet of blue-tinted paper was given her, ruler, scissors, pencil, and paste. The whole class had seen post-cards mounted in this fashion before, and one set lay on the desk for reference. This child needed considerable help, but she was a patient worker, and the thing was done at last.

The following week she was asked to choose another girl and teach her how to mount the other three pictures to match. This she did. The second three were more difficult to arrange, as the subject of one was upright. The result is shown on page 118.

The children found that the paper frame of such a considerable length (about 2½ feet) was not stiff enough,

and, quite on their own initiative, found and cut some straw board to back it; as the paste would not stick it firmly enough, they fastened it with pretty coloured blue bast, leaving little bows in the corners. This extra decoration appealed to the class extremely.

Although the cuts were not quite straight, and the margin was slightly crooked too, the pride of girl one, in showing girl two how to do what she had just learnt to do with trouble herself, was in itself enough justification for this brief return to the monitor system.

The Tissue Paper d'Oyleys.—This was a class lesson given to fifty-six children of seven years old.

Two pennyworth of grease-proof paper, cut into 7-inch squares, scissors, rulers, and chalks supplied the whole class with ample material. As the notes of this lesson, with a few records taken by the students watching, are recorded in Chapter X. of the book, there is no need to deal with this more fully here.

To any casual observer it was merely a paper-cutting lesson—to us who helped and watched it was far more. The children's attitude was to make the most of this opportunity to provide beautiful things for the Ranmoor Cottage. They were learning that to produce a beautiful thing they must use restraint, obey certain laws, attend to certain values.

The Table-cloth and Curtains.—Some yellow casement cloth was given the children to measure off into four small curtains and a cloth. A broad hem was laid, and salmon pink flourishing thread used to

tack it down with a large running stitch—in itself a decoration.

The children took turns in the sewing lessons to work the curtains and cloth. A white cloth was also made for tea time, in the same way.

The bed - clothes were made in the sewing lessons.

The coverlet was made of fine hessian, with bright stitches of coloured thrums, and tapestry yarn. The colouring scheme of the whole house was considered before the colours for this were selected.

The Tea Service and Bowls for Flowers.—We indulged in some potter's clay from the pottery works near by for this important item of the Ranmoor Cottage "trousseau," as our scheme was sometimes called.

It was here that ambition had no limit, and the soft clay yielded to all sorts of extravagances, until we remembered that the house was a simple one, that the suitability of the cup lay in its hollowness, and ability to stand level. Many ways of getting the circular plate were tried, until we found that we could not improve on our primitive mother's way of making

hers. Some of the plates looked well, and served their purpose, left just as they were, showing the coils and soft curves, and the rims were easily made stronger by an extra coil pressed and slightly flattened on the top. The children brought their own cups, saucers, jugs, and plates, to refer to, or to copy. This pottery lesson stimulated many questions. "Is clay china?" "How are our cups made?" "What makes them shiny?" "Did Abraham use cups in his tent—were they like ours?" "What were the cave-people's plates like?" The principle of the potter's wheel was talked about. A picture of him at work, a little word description from the teacher, telling how the ripples ran up the pot as it was whirled round and pressed gently by the potter's thumb or palm, was given.

The question of shrinkage had to be faced. Where does the water go? What makes the cracks come? The difficult process of choosing children to go to the brick kiln with some of the cups and plates to be "fired" had to be undertaken.

The modelling lesson put into the scheme of things, and not left as an odd illustrative medium to be taken in any haphazard method, or, worse still, bounded by the *loan* of a small walnut-sized piece of plasticine, with the injunction "make what you like," turned out to be full of possibilities, and most fruitful in raising the alert questioning attitude which rejoices the heart of the true teacher.

A few experiments in colouring were attempted, but we were only partially successful here.

The Broom.—The children must have plenty to do in their little house, and sweeping is a true joy, be the floor never so clean!

Although the model looks easy enough, it is extremely difficult to choose suitable twigs and arrange them comfortably together in any sizable quantity.

The teacher's strong hands were needed to hold, unless older children undertook the model. The class (children 7 years) made small toy brooms from the bits of twigs and one long stick they had brought in with them, and they bound these with wisps of bast.

They first experimented, and noticed that the successful brooms had their twigs arranged to press outwards; the children then started again and made nice little toys, which they took home, two or three being reserved to give tó some older children, to show them what we wished them to make.

The older children of 12 to 14 years were very ready to respond, and four undertook to make a real broom between them; they thought the best measurement for use in the cottage would be an 18-inch handle.

One cupboard was made from ordinary soap boxes willingly supplied by the grocer; stained and varnished, with little brass nails used by upholsterers, and leather hinges, it made a very convenient little bit of furniture. The woodwork centre provided the other cupboard.

The table, chairs, and beds were larger editions of

those illustrating the strip woodwork (p. 108); it was therefore not thought necessary to add them to the scheme here. The older boys made them in the woodwork centre also.

The carpet was a difficulty; some of the younger children wove rugs and straw and raffia mats on large frames 2 feet by 1½ wide, but the stitches were loose, and the mats apt to kick up.

We plaited bast in broad strips of four and five strands, and sewed the plaits together to form a surface.

Later some of the VII. Standard girls lent us a large rug they had made from an old curtain. They had doubled this and backed it with strong hessian, buttonholed in bright bold stitches the edges, and with a large darning stitch made a centre pattern. We liked this so much that we asked the girls to make us one small enough to be easily taken up and shaken by the five-year-old babies, and harmonising with the general colour scheme of Ranmoor Cottage. This they promised to do, and the younger children have been into the "top" class-room now and then to see them at work.

We have found, in working a scheme like this, that the social atmosphere of *the whole school* is helped; the younger children come in contact now and then with the older ones, and we have always found the readiest response and sympathy accorded by the older children to the Junior and Infants' School.

One of the boys, hearing that we had not attempted a fireplace, came up with the request that he might

make one. He agreed to make a small one in paper and submit it to us, before we gave him the time and material needed for the larger one. Another boy suggested that another stove be made, so that when the babies wished to play cooks and kitchen, the range should go in, and when it was visiting and tea-parties, the parlour stove should be supplied. This was of course done.

The front door was painted, and talc window-panes were put in the window frames, as we were not expert glaziers, and were afraid of a catastrophe some time, when the little ones were playing, if we had attempted glass.

Rectangles of talc may be had at 3*d.* a piece measuring 9 inches by 7 inches.

CHAPTER VII

HANDWORK IN RELATION TO THE HISTORY OF THE DOINGS OF MAN

We have already seen in Chapter II. of Part I. that the service of the hand in the progress of the race is too valuable and significant to be overlooked. We realised how immeasurably man gained in mental strength as he wrestled practically with his environment ; we saw that it was from the needs of primitive life, the need of shelter, defence, etc., that man grew increasingly master of the world.

The aim of this chapter is to show how we tried to make the handwork spring from the children's experience gained in the formal lessons in school, and to bring it into line with the rest of their thought, so that it should sometimes supplement, and at any rate always enrich, the knowledge they were gaining in other ways. This essay was taken as growing naturally out of the history of man in the making, of which they were mainly concerned in the history, geography, and Scripture history lessons.

The following quotations may make clearer the

thought actuating the handwork endeavours recorded in this chapter :—

"To leave out nine-tenths of the nation's life, and to call the rest a history of the national is misleading. . . . Treated in this mutilated manner, history becomes a pondrous chronicle, full of details, which in the absence of any other guiding principle are 'held together by chronology.'

"History shows us man in the making. 'It has to do with the becoming of past events, not simply what *was*, but with what came to be.'"—S. O. ADDY, in "The Evolution of an English House."

"The study of geography spreads out to the proper understanding of the problems of the different parts of the empire ; it serves to promote a sympathetic attitude towards the nations. . . . Attention should be directed not merely to the physical features, but also to the characteristic vegetation, and to any examples of human occupation, as well as to illustration of types of dwellings, implements, etc., most of which are very definitely related to the geographical conditions."—J. W. ADAMSON, "Practice of Instruction."

> "The world is wondrous large,—seven seas
> From marge to marge,
> And it holds a vast of various kinds of men."
> RUDYARD KIPLING.

In history and geography, at any rate, then, those who serve with the hands may be presented, "the lumbermen in their winter camp," the hammermen

with their tongs and hammers, the forger at his forge-furnace, the maker of bridges, the builder of houses and temples, the lighthouse and ship-builders, the raftsman and the painter, as well as the warrior and law-maker.

> "For still the Lord is Lord of might,
> In deeds, in deeds, He takes delight;
> The plough, the spear, the laden barks,
> The field, the founded city marks."

It is in the broad human treatment that handwork may prove even more than a valuable illustrative medium; it may serve to suggest problems which man in all countries throughout all ages has had to solve as he presses on his way towards the great consummation.

Here follow some suggestions based on our efforts to give these ideas practical form in school. They are grouped for clearness under the heads of—

1. Shelter.
2. Locomotion.
3. Protection and attack.

But in our actual work with the boys we found the three too closely connected in the experience of life to deal separately with them to any great extent.

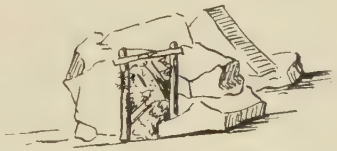
Cave-Dwellings.

1. *Shelter.* — We first considered the problem of shelter, and the cave men started our inquiry with the younger children. Rude models were made of sand,

stone, rock, and trees. The hurdles and woven shelter screens were made of twigs and moss.

In the Middle School a set of lessons grew up round the subject of house-building.

Boys and girls of 11 to 13 years of age were given a course of lessons on the lines of Mr. Addy's "Evolution of an English House." The handwork was not secondary or merely reproductive, as in the case of the work in connection with the cave men, but it was throughout indistinguishable from what might be called the more formal teaching.



From the cave with its rude screen of wicker, to the modern house of the twentieth century, a great period of time stretches, crammed full of experiment and advance. It was through practical working with the hands that new ideas of construction arose, and so handwork played a necessary part.

The first lesson showed some of the following points: the apparatus used by the teacher alone during the lesson was straight and curved branches about 20 inches long; bast, sand tray or board thickly plastered with moist clay or plasticine to form a base for the sticks. See illustration in the margin.

We started with an inquiry into the English houses of to-day, revealing the complicated plans of

rooms, passages, cellars, stairs, etc. Attempt to reduce to simplest form, the dwelling must have walls, a roof, a door ; windows and chimneys will be luxuries.

The construction was the simple form of "crucks" at either end, and the ridge pole to keep the structure firm. Compare this with the frame work of certain tents. The slanting walls meet at the ridge pole, they are filled in with moss, peat, wattle and daub, straw. Wind braces are added. The question of enlarging the house must be considered ; this problem the boys try to solve for themselves in material. All but 5, on the illustration on opposite page, show some of their attempts. The fixing of the wind braces gives one the idea of a story. These models (2 and 3) are fixed on a board, and could not have been extended in any other direction.

Figure 6 does not suffer under this restriction, and continuous "bays" are thrown out.

3 is the plan adopted in cities where land is expensive.

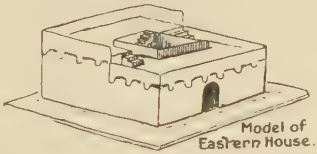
6 is the plan adopted in the country where land is cheaper, and comparisons can be drawn between rambling old country houses and the New York "sky-scraper."

The sloping walls may give place to the upright, through dealing with the wind braces. Illustration 2 suggests the transition. The wind braces projecting on both sides keep the *walls perpendicular*.

This type of work may be quite fruitfully carried out for some time, and through working roughly in

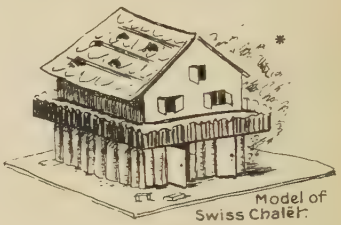
wood, the significance of different styles, the vitality of evolutionary processes, comes strongly home to the workers.

The marginal illustrations show some finished models of houses, constructed in connection with such a series. The rougher type of work shown on illustrations of page 133 are, however, far more fruitful, for the interest never narrows, as it tends to do in the elaborate making of single models; in the ruder houses, things are always growing and becoming.



An inquiry into Abraham's, Hiawatha's, the Arab's

and Red Indian's tents will lead to recognition of somewhat similar primary construction.



Model of Swiss Chalet

The "crucks" construction can be traced in the marginal sketches of men's dwellings in far places and times.

An interesting development is to take two houses in the "crucks and ridge pole" stage, and have one de-

Model of Tree House in Match-box and paper

veloped according to the needs of the dwelling house, and the other to the church ; the part portioned off in the first for the women's chamber, the aisles built as side "bays" and off-shoots for the oxen and sheep, the centre part of the dining-hall and men's room corresponds to the nave, the transept, the aisles of

the simple church. The evolution of the screen or "speer" is again interesting and fruitful, its presence in

both house and church being followed and represented.

Parts of the song of the Broad Axe may be read—

"Of the strong day's work,
The house builder at work in cities or anywhere,
The preparatory jointing, squaring, sawing, mortising,
The hoist of beams, the push of them in their places, laying them regular,
Setting the studs by their tenons in the mortises according as they are prepared,
The blows of mallets and hammers, the attitudes of the men, their curved limbs,
Bending, standing, astride the beams, driving in pins, holding on by posts and braces,
The hooked arm over the plate, the other arm wielding the axe,
The floor men forcing the planks close to be nailed,
Their postures bringing their weapons downward on the boards,
The echoes resounding through the vacant building,
The huge store houses carried up in the city wall well under way,
The six framing men, two in the middle, and two at each end, carefully bearing on their shoulders a heavy stick for a cross beam,
The crowded line of masons with trowels in their right hands rapidly laying the long side wall two hundred feet from front to rear,
The flexible rise and fall of backs, the continual click of the trowels striking the bricks,
The bricks one after another each laid so workmanlike in its place, and set with a knock of the trowel handle,
The piles of materials, . . .
. . . What do you think endures?
Do you think a great city endures?
A great city is that which has the greatest men and women. If it be a few ragged huts, it is still the greatest city in the whole world."

A collection may be made of different types of arches and windows. Illustration on page 140 shows a few cards of this kind. It is well to cut the centre of the card out and then fit in with appropriate surroundings. Good effects are obtained which the class may draw. Such a series prevents anachronisms, and helps in the making of vivid historical thinking. A collection may gradually be made for general reference in the school.

The teachers in charge of this work were reading "The Seven Lamps of Architecture," and "The Nature of the Gothic," while they helped the children; we realised afresh how man expresses himself and his times in stone and masonry.[1]

2. *Locomotion.*—It is not the purpose of this book to set out any exhaustive history, and the illustrations will probably be suggestive enough for practical purposes. A little series of carts can be worked out, and another of boats, the question of road making and bridge building

"Dug-out" from Branch

[1] It is interesting to compare some of the rough models showing the bare structure of the houses and the more highly finished model, one of which is shown on page * 134. This has taken the worker 48 hours to complete. Is it worth that?

What has this type of model accomplished that the rude one has not?

Which shows the greater possibilities?

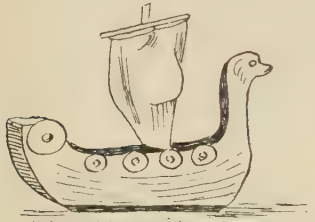
Have both the same limitations?

Do both *help*, or does either *hinder* the power to imagine?

In what way?

In what way will the models be more effective than pictures? Is this always desirable?

will have to be considered, and at once points of vital interest are raised. The reason for certain construc-



Viking ships in thin Cardboard
Linen Sail, Bead eye, etc.

Boat in Brown paper.

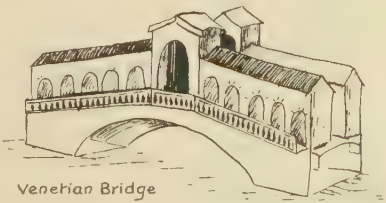
Wooden Boat burnt out

tions, the span of arches, the form of bulwarks to resist the water's force—periods of flood, rapidity of the

in Card

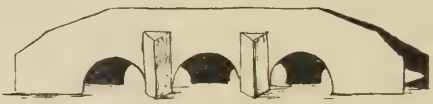
in Clay

river, the kind of boats passing under the arches, the adaptation of man's work to the forces of nature, the capturing of such forces and the fine service they render to man who ultimately becomes master, are bound to be faced by the worker. And so we come to the social relations of



Venetian Bridge

man, the highroads of the world open out, with travellers and masters of commerce upon them—



Simply constructed in fine paper.

"Coastwise—cross seas – round the world and back again,
Whither flaw shall fail us, or the Trades drive down.
Plain sail—storm sail—lay your board and tack again,
And all to bring a cargo up to London Town!"

3. *Protection and attack.*—The stone hammer, the sling, the flint-head of primitive man are interesting to the younger children. Work in connection with this period has been so fully shown throughout in the whole series of Miss Dopp's books, that we need not stay to indicate further our own scheme in following on her lines.

The Finnish Epic—Kalevala, from which the metre of Hiawatha is taken, provides a rich field for the early metal age. Here we meet Ilmarinen—

"Smith most mighty,
He's a smith without an equal,
None can wield the hammer like him,
For 'twas he who forged the Heavens
And who wrought the airs' foundations."

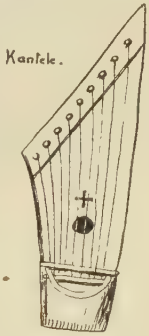
We realise again how the beliefs of man are tangled up with his doings, how tradition, legend, and

myth are wrapped about the fresh activity of the world in its youth.[1]

In work of a later period, with older children, shields of different periods with their quarterings, may be made up from boys' papers and encyclopædias. There should be a few sheets of keys, as page 140 shows, made of stiff paper, with the devices cut out and mounted thereon ; the nine points, the four quarters, the shapes distinctive of certain centuries must be shown. These sheets with descriptive matter copied from books should be within reach of all the school, and used freely in the making of the individual shields illustrating the period of history studied.

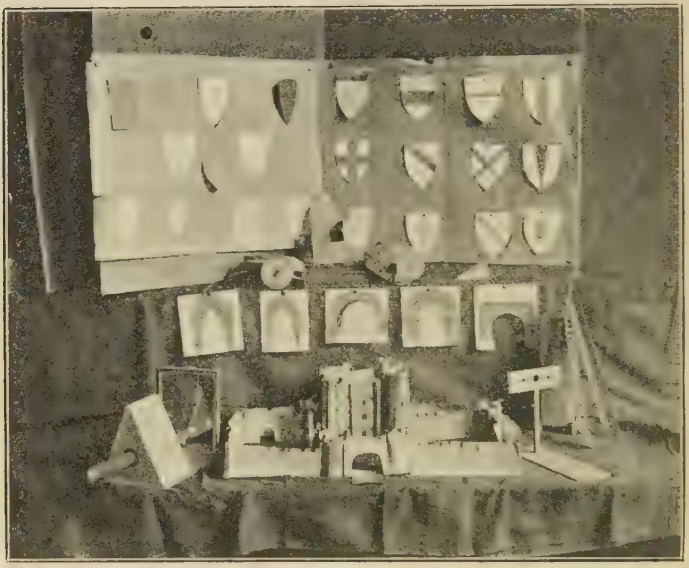
A book on heraldry proves fascinating in this

[1] Kalevala offers delightful literature courses, the stories of the Kantele-Väinamoinens harp, and the sampo,—the magic mill, are worthy of a good story teller. The magic mill on one side a corn mill, on another a salt mill, on the third a corn mill, is always mysterious and full of promise. Expression by material has never been forced in connection with these stories, for to use handwork exhaustively in any set of lessons, more especially in literature, is a danger. It is said that "great men bring their bogeys with them," and it is true that in the great truth that impression is largely clarified, modified, and fixed by means of expression, the "bogey" appears in the danger of losing the appreciation of a beautiful story through the eager seeking for something to represent or make from it. We have therefore never spent a great deal of time over elaborating a complete scheme, but have quickly responded to the children's suggestion, "let us make . . . let us play . . . " and left it at that. The children knew they could have material for the asking, and some tried to make the kantele, the sampo, etc., while others quickly read or softly chanted the verses to themselves; others drew pictures.



connection, and the significance of the label, the crescent, the mullet, the bird, amulet, fleur de lys, rose, cross, or double quarterfoil is appreciated.

Such descriptive matter as the following would

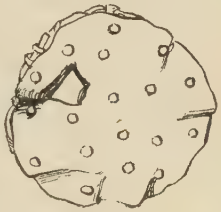


prove helpful when the children are working out special shields of their own period.

Prehistoric shield made of wood, strengthened by folds of hide. The latter portion of the Bronze age circular shields hammered out of a sheet of bronze. Handle was riveted into the shield—there was a projecting boss. There was a leather lining, as the metal was beaten out so thinly, ornamented with

patterns, intersected snakes, or concentric rings, or dots; 27½ inches across. Circular, long, and double forms are also to be seen on coins.

Homeric shields were large enough to cover a man; made of osiers, with folds of ox hide, bound round the edges with metal—fastened to the waist with a belt, and later a set of straps for the arm was made.



Roman shields, of two kinds, clipeus and scutum, original shape was square, large—on the scutum was inscribed the names of commanders.

Cane shield, covered with leather, and studded.

Mediæval shields differ in shape, circular are the earliest, convex, and fitted with sharp pointed boss. Wood and metal rim.

Early Norman, kite shaped, armorial bearings placed on them. Heraldic shield best known is neater shape of thirteenth and fourteenth century.

Highland targe, of wood, leather, with brass decoration, reverts to early circular forms.

Among forms of shields used by savages are Australian war shield and parrying shield.

The above has been taken almost bodily from Harmsworth's Encyclopædia. "Social England" may not be available, but Barnard's "Companion to

English History" is within the reach of all, Oxford Press. It is a good plan to keep a book of cuttings, so that whatever a boy finds out in his reading may be recorded for the general good.

Handwork is often said to be opposed to the literary side of the school—this need not be. Handwork often gives a point to reading, and although it may not appeal to the highest æsthetic power, for it certainly is of an interested kind, yet it serves to press upon the worker the value of books, and helps him in learning how to use them for his purpose.

The boys making the shield of Richard Lionheart, Saladin, Horatius, must attempt some simple research work before they can start upon their material. One boy could find out the shape, another the "field-charge, quarterings," and another look out the material used by the shield maker.

CHAPTER VIII

THE HISTORY OF THE CRAFT

"Every industry has a purely humanistic element in it, or it could not win the lifelong devotion of those engaged in it. And who ever succeeded who did not love his work?"

DR. STANLEY HALL.

"Still find we up and down, In country and in town,
The footprints of our father's holier tread;
A relic here and there, A pageant or a fair,
An old tradition floating round the dead."
[Verse found in "The Weaver's Craft," by THOMSON.]

IN Chapter III. of Part I. some reference was made to the rich field before us, in connection with the history of the craft, and this chapter offers a few suggestive studies which have given our children real pleasure.

It is an added inspiration to a worker to realize that he is one of many, all facing similar difficulties, striving with more or less success with the same aims, with the same ideals enthusing him. "It is easy to grow into the thought that all the world centres in our own workshop, and it is wise to open windows outwards so that we may see far down the ages, workers wrestling, dreaming, doubting, achieving too."

This can be done in many ways. Gradually make

a collection of pictures showing the crafts. The two of Nicolaes Maes, and the one of J. Israëls might be pinned up during a period when weaving is being taken.

Mediæval England was rich in trade workers, with their City Guilds, the Silversmiths, the Cloth-workers, each with their special trade songs. Some of these can be looked out and read. The Song chapter following this is an expansion of this suggestion.

Sketches of the old Bruges lacemakers, the Bedford pillow-lace workers at the cottage doors, the Florentine craftsmen, the craftsmen of Mediæval England, all give the humanistic interest so vital to our work. A little quiet reading with John Ruskin will make us once more eager for the personal touch, for ability to see the *man in the work*.

The children can be taken to see the city Guild Hall Museums where the Platters and Cups belonging to the Guilds are shown. In London there is the Guildhall, its Museum, the Draper's Hall, The Royal Exchange, the Ironmonger's Hall, facing Fenchurch Street, The Fish Market, Poultry.

Dr. Stanley Hall says, "If I were charged with the development of a textile school in a city of looms and spindles, I should want at least a year of preliminary work. I would study, and try to practise every process of every type of labour; I would ask the leaders to tell me all they could suggest or I could ask about; I would sketch the history of each great

plant in town, and the story of the development of the craft itself, take photographs, get statistics, interview all the wiser workmen, find out every possible point of contact of the industry with practical science, also with legislation, its relation with other occupations, its hygienic conditions, power and its distribution, periods of prosperity and depression, labour troubles, etc. I would insist upon the frankest and heartiest co-operation on the part of all concerned, and require *carte blanche* to use everything of pedagogic value in the largest sense of the term ; and then with the aid of such material, I would strive to grade and curriculize what seems most needful to develop the maximum of culture and skill which always should be combined, utilizing every comparative ray of light, from the experiences of other cities and lands." . . . "Every industry has a purely humanistic element in it, or it could not win the lifelong devotion of those engaged in it. And whoever succeeded who did not love his work ? "

Let us now come to some studies of the workers ; starting with ones of the Mediæval Guilds of Britain and Florence, we will look at the woollen weavers, the silk weavers of Spitalfields, the Paisley weavers, and the workers of the Bayeux tapestry.

(*a*) *The Guilds*—

"Let all share the same lot, if any misdo, let all bear it."

In some of the earlier chapters it was shown that the primitive activities of man made a special appeal to the younger children in our schools, whose outlook

on life is comparatively simple. In the middle and top standards, however, life is growing more complex, there is the delight of forming into secret societies, of drawing up mysterious documents beginning "I promise," . . . and the banding together into companies which lately has taken the splendid form of the Scouts Movement.

In handwork we have a very rich field to work over in this connection. Mediæval times present in many ways the very elements of life, appealing to the young workers in the schools with their awakening powers of organization and response to loyal bonds. It is no bad thing to take one of the hours set apart for handwork, and boldly use it for the purpose of interesting the children in other workers and their Guilds and Companies, leading on in the upper standards to the conditions of labour to-day. But it is better still to be so imbued with the history of the crafts, that during working hours a bit of description here, and a query there, slips out, making for real vitality and colour.

How many boys working in the wood shops to-day know that there was a Carpenters' Guild or Brotherhood in London as far back as the time of Edward IV., when the King granted a charter "to certain freemen of the mystery of carpentry of the City of London, that they or any other of them might establish a Brotherhood or Guild within the City to remain for ever, to consist of one master, three wardens, and a community of freemen of the said mystery"?

It is fascinating to study the history of the guilds, and the children find themselves suggesting some problems and seeking some solutions in the very manner of the old Brotherhoods—the difficulties in connection with the markets, regulating buying and selling prices, output and demand, had to be met—the rules of membership are good reading for these adolescent workers to-day.

These mediæval craftsmen were bound together to protect their craft. Each member must prove himself a worthy craftsman before he could be enrolled. The standard of work had to be rigorously upheld. The great aim of the worker was not so much to raise himself as an individual from one class to another as to prove himself of service to the community; his ambition was to rise for service in his guild and town.

The feeling of loyalty was strong, every member suffered with his guild, and partook of its honour and glory. Their motto was "Let all share the same lot, if any misdo let all bear it." The bad work of one injured the whole craft, an individually low standard of work was severely punished by the Guild itself; sometimes a fine was imposed—and here is the judgment meted out to one, who fell from the high standard of his guild, but confessed his inferior work.

"The quhilk day, John Blair, weiger, of his owin confessionne, is tryit and convict for insufficient work, for the quhilk he becomes in the deiken and maisteris willis; and if evir he commit the lyke in tyme cuming,

to los and amit his fredome of craft, and nevir to work within this burght again as ane frieman."

Some quaint old bye-laws seem to protect public interest too. Glovers were forbidden to sell their wares at night, because "folks cannot have such good knowledge by candle-light as by day, whether the wares are made of good leather or of bad." Everything tended to strengthen the pride in good work. The Basket Makers Company of London had its first rule running—"that all persons enfranchised in the craft were to make good, strong, and perfect wares to the use of the commonalty of the City." The Pewterers were not allowed to work by candle-light. The City of London holds its halls and charters today of the craftsmen of these times, from the Weavers' Company of 1154, one of the oldest, to one of the youngest, that of the Gold and Silver Wire Drawers, and the goodly company between of Leather Sellers, Saddlers (a very important craft in days when travelling was mainly by horse), Patten Makers, Dyers, Wax and Tallow Chandlers, Cordwainers, Armourers and Braziers. Each Company had its head of Incorporation, the Deacon, the Masters elected, the Clerk, the Brethren of the Craft, some of whom were maisteries of the craft. The continuous history of the Crafts and Guilds is good reading, from the disputed sources of Roman and Saxon times, from the Saxon "Frith Borcho" or Strongholds of Brotherhood, on through the gradually widening distinction between worker and seller, craftsman and merchant, through

the actual separation into guilds of Merchantmen and Craftsmen's Societies, where at last the Guilds refused to admit craftsmen whose work "syled the cloes" and soiled the hands, through the constant struggle for power in the township, until at last Queen Mary helped the skilled craftsman to his own, in her letter from Edinburgh, dated March 1, 1556, in which she pointed out the great benefit of having the good craftsman as a good burgher, and declared in favour of the craftsman having more power in the burgh. So, as we trace the history down, we come to more complicated differentiation, and find three classes within the companies, the craftsmen, the merchant employer, and the exporter, and so to modern times.

Pictures full of interest may be given of the Hammermen of Edinburgh, of the 14th and 15th centuries, with their altar in St. Giles' Cathedral, and their rich "monk cloth," which every member, however humble, might have to cover him as he was carried to rest in his long sleep from honest work; of the silk weavers of Spitalfields and their singing matches (two interesting old documents concerning these refugees are to be seen at the Guildhall, London, to-day); of the sturdy old harness weavers of Paisley of the 17th, 18th, and early 19th centuries, with their "wondrous skill in handicraft, their keen sense of nature and of poetry, their sturdy radicalism, their god-fearing integrity and their patient suffering." The story of these men who loved their craft will be inspiring telling, and the weaver poet Tannahill, alternately

standing at his loom, and jotting down his haunting rhymes on the little writing shelf attached, with his love of country sights and sounds, will prove a refreshing contrast to the saddening industrial life that was surely drawing nearer.

And now and then the children might have some guidance as to reading about these times for themselves —histories showing social life are full of pictures— here is one taken from Besant's "Early London."— "A mediæval city made everything that was wanted for the daily life. . . . In the eleventh century London made its own ironwork, its own steelwork, its own goldsmiths' and silversmiths' work, its own saddlery, its own leather work, its furniture, its everything. The craftsmen gathered together according to their trades; just because the trade was hereditary by unwritten laws and customs, so that the men of the same trade married in their trade, and formed a tribe apart, they were all one family; next because there was but one market or place of sale for each trade. The saddlers had their own 'sheds' or shops, the goldsmiths theirs, and so on. A separate craftsman, if it had been possible for such a man to exist, would have found it impossible to sell his wares except at the appointed place. Next, the workmen had to live together, because they had in their own place their own workshops, and the use of common tools and appliances, and lastly because a trade working for little more than the needs of a city, must be careful not to produce too much; not to receive too

many apprentices, and to watch over the standard of the work. Every craft, therefore, lived together under laws and regulations of its own, with a warden and a governing body. . . . They lived together and close to each other, each craft with its own group of homes or cottages—perhaps mere huts of wattle and daub, with thatched roofs and a hole in the roof for the smoke to go out. . . . The lane from the village to West and East Chepe lay between the houses, winding and turning, sometimes narrow, sometimes broad; the prentices carried the wares, as they were made, to the market, where they were exposed for sale all day; from every one of these villages from 6 in the morning till 8 in the evening the sounds of labour were heard; the clang of the hammer on the anvil, the roar of the furnace, the grating of the saw, and the multitudinous tapping, beating and banging of work and industry; it was a busy and industrious place, where everything was made in the city, that was wanted by the city."

(*b*) *The Florentine Guilds.* "Who wants his mind active, must make his hands hard," runs a proverb of Florence, and it will be well for the little handworkers in the schools in England to know something of the busy Florentines of old, for their city of commerce—

> "Counts one-and-twenty trades in all
> Of equal rank."

Staley's book on "The Guilds of Florence" yields delightful pictures and chapters, showing us the Guild

of Shoemakers, Blacksmiths, Masters of Stone and Wood, among others. The Guild of Cómacine, the Mason, the House-Builders, in itself would be of greatest interest.

The following little description of a market square in Florence in mediæval times is taken straight from this book; it glows with life, colour, and sound, and makes the human appeal.

From Staley's "The Guilds of Florence."—"Before dawn rumbling wheels bore in the day's supply of country produce. The clatter of iron hoofs upon the big flat stone setts mingled discordantly with the harsh imprecations of drivers and dealers. . . . The Florentines of old were early risers, for before the bells for 'Lauds' had ceased their clang in the belfries, artisans were all thronging the portals of the churches, euphemistically at least, assisting at the hurried low Mass, as for a brief space they checked their course to smithy, tanyard, and loom. Yes, work began at daybreak the year round; aye, and before the shades of night had passed many a flickering lantern danced its way across the grim old market place.

"Mingling in the throng were leather-aproned smiths and armourers, bare-armed cloth dressers of the 'Calemila,' silk spinners wending their way to San Bigio, carders and weavers hurrying to their workshops from Oltrarno, goldsmiths' artificers in tidier guise, dyers and tanners with stained hands and arms and clothes, and many another honest working man and

working woman—greeting one another with kindly words of cheer or taunting cries in jest. . . . The day wears on . . . and the *Messeri* of the Great Guilds pick their way through the chattering, chaffering crowd, to and from their palaces. Possessed, as most were, of pleasant villas in the suburbs, where true *villeggiatura* was ever to be had, they loved the Old Market, and all its dirt and noise. It was to every Florentine the well of his life, the fulcrum of his fortune, and the show ground of his pride."

Silence was unknown in the old market, and all day long the noise of crying voices rose to mingle with the jangle of bells from the belfry towers. The hungry apprentices run out at noon, mischievous and merry-hearted, munching their lunch of bread, cheese, and sausage. "Artists, too, and artisans, with brief respite for their hands, flock into the market precincts —dirty, hungry, and tired. Some are bent on dining simply in the open, on fruit and eggs . . . and some, with pockets better lined, are intent on richer fare." Then the afternoon *siesta* until "the work bell rings, and in a trice the dreamers rise and stretch themselves, and hie them to their tasks again." . . . "Evening coming on apace finds many a group of interested hearers gathered around the seats of the story tellers, for few things did Florentines more thoroughly enjoy than tales—romantic or of war." . . . Now, "Night settles down upon a sleeping city, whilst ghostly *sbirri*, watchmen—steal along the streets with clanking, iron-shod staves and glowing lanterns."

(*c*) *Weaving—Woollen Industry.*—After an inquiry into the process of weaving, and some lessons in the actual craft, the children may be introduced to some of the people who have faced and solved some of the problems they are meeting in their way to-day. They may get some idea of the tireless energy from far-off times which has kept men in all ages, in all countries, under so many varying circumstances ever steadily progressing.

Thornton's "History of British India," vol. i., gives us the suggestion that "Ere the Pyramids looked down upon the valley of the Nile," India's "skilful artisans converted the rude produce of the soil into fabrics of unrivalled delicacy and beauty." Looms were most likely first invented in the East—the Egyptians and Hindoos being the first weavers.

The Romans knew the craft of textile weaving, and put up a factory at Winchester.

Later we can tell of our King Edward III.'s invitation to the people of Flanders to come to England with all their spinning and weaving apparatus, and teach us the craft. It seemed a foolish thing to have to send all the raw wool out of the country to be made into cloth on foreign looms; and a law was made by which only the royal household might wear foreign cloth.

Picture John Kempe in 1331 organising the seventy families who came in response to this invitation, with his workmen and apprentices of his mystery, with his goods and chattels, and with any dyers and fullers

who would willingly accompany him, to carry on their mysteries in England.

These families settled down wherever they could find good water, fuel, and material, and so began the Yorkshire, Gloucester, and Western Counties industries.

A couple of hundred years later James VI. brought over from the Low Countries some skilled weavers, to set up their looms in Edinburgh, and "to instruct the Scottish youth in all the mysteries of their craft." These folk, however, had a troublesome time, for the Scotch folk were jealous of the royal privileges granted them, and when kirk and minister of their own persuasion were given them, as well as exemption from all taxes, they would have no more of it, and sent the "Flemying Wobsters" home again.

But in 1601 we find others coming from Norwich and Leyden, who settled in towns north of Edinburgh. Here we get the first hint of the technical instruction of to-day. "The Royal Executive Commission desired in every shire, a school should be erected in one or other of the burghs at the expense of the burgh, and that every parish within the shire should send either one or two boys (over ten years of age) . . . to be taught spinning, weaving, 'litting, and dressing' of yarns and cloth."

Another hundred years later many more folk from that weaving centre, Flanders, came over, driven to leave their homes through persecution and unrest. They settled about the West Riding of Yorkshire.

Here is a little description of the district. "At each house a tenter, on almost every tenter a piece of cloth, kersie, or shalloon." . . . "At every considerable house there was a manufactory. Every clothier and weaver keeps at least a horse or donkey to carry his cloth to market, and bring back the yarn, to carry the warp and weft from and to the mill." "The houses were full of lusty fellows, some at the dye vats, some at the looms, others dressing the cloths, women and children carding, spinning—all busy from the youngest to the eldest. Not a beggar or idle person to be found."

The manufacturing mills were simple affairs, for scouring, dyeing, carding, and fulling. Weavers brought their own work, paid for the processes through which it had to go, and took it home again to spin on the old spinning jenny. "Every cottager might be a weaver, and every weaver was really a manufacturer."

The Rev. Alfred Eastler tells us how the men would go "to Huddersfield, buy 50 lbs. of wool, carry it home on their backs, spread it out on the house floor, 'strinkle' it with oil, layer on layer, then beat it with sticks. They tossed it altogether, then turned it off in a floss state. . . . Hand cards were then used, and they worked it together in long slivings; it was then spun into tough or fine threads, then into warp and woof." After being woven it passed through other processes, and finally was exhibited on the churchyard wall for sale. The king's "Aulnager" affixed the price, after measuring it.

A look into one of the houses will help to keep

the human interest warm, for this is the crux of the whole treatment ; such lessons must never degenerate into a mere detailed account of *processes.*

" My grandmother," writes one of the time, " would be hard at work at the old spinning jenny with the stubbing . . . spinning the yarn, and in the same room or chamber my grandfather was sat at his hand loom weaving broadcloth. Many hours have I sat at his side, watching the progress of the piece as it came over the beam, and wondered how it could ever be made into the fine broadcloth, such as he used to wear on Sundays. The small manufacturers, who, on the hillsides, wove, in the long, low, and many-windowed attics, the good broadcloth that our great-grandsires delighted in, braved dangers on the road by no means imaginary. It was one thing to sell your goods in the markets of Nottingham or Macclesfield, and such districts far away from their homes, and another to bring home in safety the good pieces of gold to feast the eyes of the goodwives." And so to a talk on the perils of the road.

Another day we can look into a cropper's shop in Cloth Street, Huddersfield, and watch the croppers (men who used to cut the nap of cloth smooth, with great scissors, as they " stood at the dubbing board, scraping down the cloth with teazles to raise the pile, whilst from the upper chamber came the click of the handshears that cut down the nap)."

The history of one of the children's days could be given, and a little comparison made with the improved

condition that legislation has brought about, since the days of the children's bitter cry, voiced by Mrs. Browning. The older boys and girls may be asked what further suggestions they can make.

When Queen Victoria was a little maid in Kensington Palace, these little children of 5 and 6 years old were going to work in the raw morning hours, at five o'clock, and came dragging home again when it was too dark to see ; in summer as late as ten o'clock. There was no time, even if they had not been too tired, to play ; they stood all day patiently, wearily in the noise of the looms, snatching meals when they could. A spoonful from a pot of porridge, with treacle in it, placed at the end of a machine, must satisfy, till they could get forward with the work to take another mouthful.

Another talk can be given bearing on the competition between hand and power looms. The history of inventions is a fascinating one, the children often suggesting, from the rough sketch on the board, or crude model, the actual step taken by the next inventor. John Kay, of Lancashire, invented the fly-shuttle, so that only *one* hand need be used instead of both; often, if the cloth was wide, two workers had been necessary. Robert Kay, the son, followed on with another invention. The spinning jenny, by Hargreaves, in 1764 ; the water frame, by Arkwright; the Luddite riots in 1797, when the first factory was worked by steam, must all be brought before the workers of to-day.

Fine pictures can be presented of these stirring

times. Hargreaves, earnestly thinking over his problem, sees the spinning wheel upset, and as it lies on its side, with the spindle upright, he revolves the wheel, and there flashes into his mind the conception of a machine bearing more than one upright spindle. Later there is the furious mob of handworkers outside, and the broken jenny within the house.

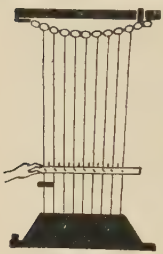
There is Crompton playing the fiddle at 1*s.* 6*d.* an hour, to get the money to buy necessary tools for his "Hall-i'-th'-Wood," or wheel, or mule; now he is quietly working up in the low attic, keeping his secret as well as he can from his jealous neighbours, who peer in at the windows, and try and hide in the dark corners of his house.

This is how men join hands right down the ages.

Not only the appreciation of progress in time, but the interchange of nation with nation must be presented. The introduction of various looms to different countries can be worked out. Reasons for local industries are found. When the Japanese loom was taken to Calcutta the warp threads kept breaking, until the workers realised that the dryness of the atmosphere had much to do with the failure.

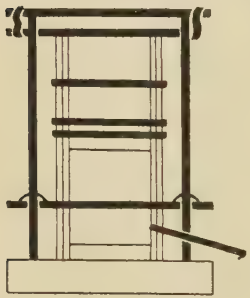
Local conditions are great factors in the perfection

of any industry; fine-art colours in silk and ribbon cannot be produced in such perfection in England as in France, partly owing to atmospheric conditions; Burton ales are conditioned, partly on account of the water of the locality. The children are growing a sturdy conviction that there are laws of cause and effect—certain hidden laws operating behind apparent chance. The differences in the looms will be interesting to notice—the Indian having the beam on top, the English at the bottom, the hanging loom of the Grecian, the horizontal frame of the Indian, the vertical one of the Egyptian.



Old Egyptian Loom.

Delightful pictures can be drawn of the home craft connected with the processes previous to the spinning, the preparation of the yarn, the sizing, drying processes, the winding on to bobbins.



Later Egyptian Loom. From a painting at Thebes.

(*d*) *The Weavers of Paisley.*—Here is a little sketch of the weavers of Paisley in the seventeenth and eighteenth centuries, in which all the children working with their hands at the simplest little looms used in school to-day will be interested. If a Paisley shawl can be shown, so much the better; and old-time prints of folk wearing the shawl, with the

point far down the back. The weavers of Paisley tried to imitate the soft Indian shawls which were sent home from Cashmere, doing with a single loom what the natives did with the needle. It was the French who brought the shawls of Turkish origin back from Egypt as presents to their wives; then the fashion grew, and though the loom shawls could never be as beautiful as the more irregular patterned and uneven fabric of the real Cashmere ones, some were very valuable, and the Paisley weavers gained great skill at imitating them. Let us look at this town where the weavers were busy long before the Paisley shawl time.

The very streets by their names tell what the people who live there do. This is a weaving town—Lawn and Silk Street, Thread Street and Shuttle Street, make us sure we shall find some weavers' shops and "Beaning" shops if we go down and look for them. Besides, we meet the weavers "carrying their webs in clean white linen bags," the draw-boys with their blue caps, the little, covered vans of the dyers collecting the yarn.

These old harness weavers of Paisley in the seventeenth, eighteenth, and early nineteenth centuries, with their "wondrous skill in handicraft, their keen love of nature and of poetry, their sturdy radicalism, their God-fearing integrity, and their patient suffering," will be worth knowing. They will show us how, although they worked so hard and constantly, life was not a daily deadening drudgery, but was lightened

and illumined by a "love of beauty in the industry," and a pride in the special product of their town. We shall meet in them true "handicraft workers of patience, skill, and devotion."

Here is one of their "shops," a long, low room, giving on the street; six looms are set up, and the little group of owners are standing, some at the door smoking, others round the fire discussing local and national affairs, and the weighty matters of the kirk. It is the dinner hour, and the "draw-boys" are snatching some fun out-of-doors between work hours. Perhaps the weavers are discussing the premiums in connection with the "Old Weavers Society," for they are thrifty folk, or a poem of their weaver poet, Tannahill, or it may be a botany specimen that is interesting the men, for they take long walks over the country, and belong to Botany, Natural History, and Fishing Clubs.

Some women have come in bringing the shawls they have hemmed, and fringed, perhaps they will stay to help the men in preparing the details of harness. Now they go back to work, and the little draw-boys scamper in and stand barefoot on the clay floor. There are some interesting patterns on the looms, for the workers often design their own, and some are very clever, and take the greatest interest in the double work of creation and production, their minds are alert and eager as their hands fly over the threads. Often they sing.

Sometimes a loom is stopped, and the worker

dipping into the little ink bottle attached, jots down a note to work from later, some fragment of a drawing for a new design, perhaps some lines of a rhyme which have come singing into his head. This is how R. Tannahill made most of his verses, standing at his loom in a Paisley shop, thinking over his long country walks; the thoughts of his fresh open-air life came to him set to the rhythm of his loom in his work-a-day life. "Though humble my lot," "O row thee in my Highland plaid," "Gloomy winter's now awa'," "When Rosie was faithful," all came like this. He had a little writing-desk fixed to his loom, and though his friends begged him to give up his hand work, and make verses always, he made up his mind to "creep thro' life, a plain day plodding weaver," and to take the bonny countryside, on the "sunny sabbath day," when work-worn bodies get their play—for his refreshment, joy and inspiration.

The draw-boys were a fun-loving set of boys, and though they had to give a heavy day's work to their masters, they had a good time generally. They had to collect the ravellings, and waste threads from the looms, to sweep and clear away the dirt, to mend the bridles, and wash the brushes and keep the windows clean. They often had to help to prepare the harness and set up the new threads for a piece; and their masters would give them a good feast of bread and cheese if the work was long and heavy. Their work began early enough in the morning, for they had to "chap up" the master, and then "dust the lay and

temples, clean and oil the spindles." If they were careless they often got kicks, but soon after, master and boys would be singing some favourite songs together. All masters were not alike, and Mr. Gilmour, who knew the Paisley workers well, tells us of one who never punished his boy, but spoke and treated him as an equal, recommended some particular song as beautiful, repeated scraps of poetry, and told some interesting tale which awakened a thirst to drink at the fountain he indicated. "I got the cream of Scott, Hogg, and Galb in this way before I had heard of their existence. When everything failed to recall my interest and attention, 'Tak' a jink for five minutes!' he would say; and on my return we started a song, and everything went on to our mutual contentment."

It was not all work, for on Mondays "the shop often went off on holiday, especially when the fruit was ripe in the orchards; then the weavers shook the trees, and the draw-boys picked up the fruit. The weavers were paid by the piece and had their own looms, so they could order their lives, picking up and laying down the shuttle as it pleased them best. There was time for creative work, and time for happy outings. Later, however, as the press and stress of work increased, the usual working hours grew long, starting at six in the morning the workers would be weaving till dark; and before a holiday they had to work through a whole night to balance the output.

Still, the draw-boy might be promoted to be a weaver, and a weaver rose to be a manufacturer;

there was in this little company of workers "peace, gaiety, and the quiet mind," leisure to work well, joy in creation, friendly co-operation, kindly human companionship, and a wide circle of fine inspiring interests to illumine the soul of the worker. "Man did not live by bread alone," his loom told the story of his expanding vision.

(*e*) *The Silk Weavers of Spitalfields.* — These French emigrés who wrought delicate fabrics of glorious hues in our own country offer another delightful picture.

The refugees of 1685 brought their mystery with them, and set up in the wide latticed windows of the upper rooms of their houses in Spitalfields the looms they had brought with them. They loved singing birds, and would keep linnets, woodlarks, goldfinch and greenfinch, and they could sing themselves too, having "singing matches, which they determined by the burning of an inch of candle," so Walford tells us.

Two interesting documents on the case of the French Protestant Weavers are to be seen in the library of the Guildhall of London.

One sets forth the arrangement with the English company of weavers, whereby "Protestant strangers should work in their trade." They complain of being persecuted, to such an extent that they will have to leave the kingdom, if it be not stopped. They contend that the bringing of their "mystery of weaving stuffs and silk, after the French way," has been to the great advantage and benefit of this nation,

and to the great loss and impoverishing of the French king, who lost by the persecution against his Protestant people, "both his manufactures, and his subjects."

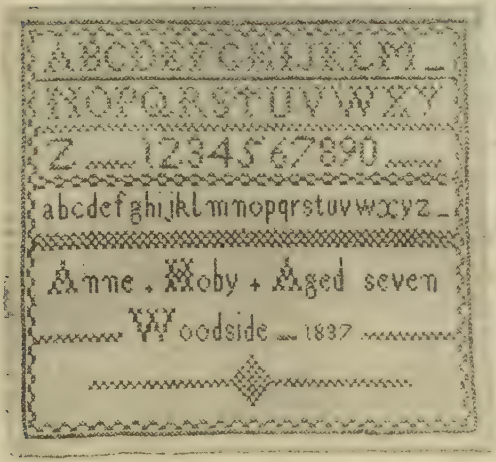
This appeal was considered by the House of Commons, and the second document records the reading of a bill to prevent their ruin and oppression, notwithstanding the representation of the English weavers that a thousand families are being ruined by the taking away of the trade by the Huguenots.

(*f*) *A chat with the girls in sewing time.*—Our girls sitting sewing in their class rooms often have but the vaguest notion of similar work belonging to other times and countries. Their field of vision is bounded by the garment they are making, and there is no feeling of kinship with the needle women of the past.

Some old samplers may be brought and shown, and a little study given of the hours spent in this way by the girl of the early Victorian period and before. The exquisite finish, the skill and patience of the worker is bound to excite admiration. The illustrations, one on page 167, one on page 168, show beautiful pieces of embroidery worked over a hundred years ago; the stitches are not clearly seen in the photo, but the originals are beautiful.

We may jump the centuries right back to William the Norman's time, and still find women with the needle in their hands, making beautiful pictures in colours.

There are so many cheap reprints of the Bayeux tapestry that it is quite easy to show this to the girls.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Anne Moby Aged seven
Woodside 1837

They may picture the noble Saxon ladies going with their knightly husbands and fathers to Normandy, and joining there with the Norman ladies of Matilda's Court in stitching the wonderful tapestry.

Their intense interest in the vital happenings of their times were worked into that long linen cloth 227 feet long, by 20 inches broad. There they depicted Harold at sea, the messengers and William, William at Bayeux, Harold giving the oath to him, William

going across the sea to Pevensey, the soldiers hurrying forward to Hastings to seize food, the camp, the battle, King Harold slain, the English fleeing.

Not content with a historical account of the times, literature had a place, and some of Æsop's Fables were illustrated ; here too was the farmer at work on the land, ploughing, sowing, harrowing. The border

is decorative, and again the ladies stitch their fancies from the old legends in gay colours to enrich the tapestry; there are griffins and centaurs, birds and beasts of every and no country, trees, and ships and figures.

Our twentieth-century girls take up their own decorative stitching again, feeling that they too are in the long line of workers, and their resolve is strengthened to be more worthy of their noble, ancient craft.

The patient fingers that have worked are dust, but the message rings downs the centuries to us to-day that true work is never lost, but reaches out to the times as yet unborn if only it be wrought in sincerity.

CHAPTER IX

THE BROADER MARGIN

A Song Chapter

The rhythmic character of some types of handwork, the joy of the worker as he sees his thought and work grow under his patient hand, naturally find expression in song. Yet it is not often that we find the children (who are more sensitive still to this spontaneous outburst of joy) singing in school, as their hands move over the material given them. Theocrite is still with us, but he is not often given the chance to work singing at his bench, in pure gladness of heart.

It is good to give some of the old songs of the workers who sang when there was still *time to rejoice.*

In some of these old songs we have the direct simple asking for a blessing on the work of the hands, the Lord of life and work will sanctify, and make fruitful the honest labour of the long day ;

. . . . . .

"And bless, O God, the handling of my hand,
What time I rise in the morning early,
What time I lie down late in bed." . . . *

The women of the Highlands who spin in the long winter nights, chanted at the warping

"Give to me Thy blessing O God.

. . . . .

Consecrate the woof and the warp
Of every thread.

. . . . .

Since Thou, O God, it is who givest growth
To each species and kind,
Give us wool from the surface
Of the green grass.
Consecrate the flocks in every place,
With their little lambs, melodious, innocent,
And increase the generation
Of our herds." *

The fishermen consecrate their boat with prayer before they set sail, the helmsman and crew take up the refrain alternately.

Helmsman. "Blest be the boat.
Crew. God the Father bless her.
Blessed be the boat.
God the Son bless her.
Blessed be the boat.
God the Spirit bless her.
All. God the Father,
God the Son,
God the Spirit,
Bless the boat."

There are several strong, beautiful verses chanted in a similar way.

"What harm can befall you
With God the Father with you?"

asks the helmsman, and the crew reply confidently—

"No harm can befall us—not a thing."

The final verse is indeed a benediction chanted by all, for all—

"The God of the elements,
The King of the elements,
The Spirit of the elements,
Close over us
Ever eternally!" *

The Sussex fishers casting their nets for the mackerel used to chant—

"There they goes, then;
God Almighty
Send us a blessing, it is to be hoped."

As the barrels were cast over into the sea, attached to the nets, the fishers cried—

"Watch barrel, watch! Mackerel for to catch.
White may they be, like a blossom on a tree.
God send thousands, one, two and three,
Some by their heads, some by their tails.
God send thousands and never fails." (1)

Among the many Dr. Carmichael gives belonging to the Highland farmer is the beautiful reaping blessing—

"God, bless Thou Thyself my reaping,
Each ridge, and plain, and field,
Each sickle curved, shapely, hard,
Each ear and handful in the sheaf.
Each ear and handful in the sheaf." *

The goats, sheep, lambs, the flocks and herds are commended to the watchful shepherd—

"Send them to a kindly fold."

Some are given into the care of Peter and Paul, James and John, to

"The care of Bride fair, and of Mary Virgin." . . . *

The pride in good work shines from these fine old

songs and heartens the worker through his days of toil. The wool carder's rhyme runs—

"Taary woo', taary woo', taary woo is all to spin,
Card it well, card it well, card it well ere you begin ;
For when carded row'd and spun,
Then the work is hofelins (half) done ;
But when woven, drest and clean,
It may cleading (clothing) for a queene." (2)

There is the natural call "all together" of those working to a given time over one strenuous bit of work—the heave, heavo—of the boatmen—the refrain in the Madagascar stone-drawer's song (below).

The promise of good things to come as a reward for labour is delightfully clear in the following song—

SONG SUNG BY THOSE WHO DRAW TOMB-STONES IN MADAGASCAR.

"Hullò, ìs there a fèast ?
Whỳ, yès there ìs !

Hullò, you nòbles, say, ìs there a fèast ?
Whỳ, yès there ìs !
Then thìnk of the tùrkeys, you bòys over thère !
Whỳ, yès there ìs !

Hullò, you chìefs, say, ìs there a fèast ?
Whỳ, yès there ìs !
Then thìnk of the fìne fat gòose, my bòys !
Whỳ, yès there ìs !

Hullò, boys behìnd, say, ìs there a fèast ?
Whỳ, yès there ìs !
Then thìnk of the fine fat ròoster bòys !
Whỳ, yès there ìs !

Hullò, say, ìs there a fìne fat òx ?
Whỳ, yès there ìs !
Then ròll her [1] awày down Ikòpa, bòys !"

[1] The stone.

(*Another translation of the same.*)

Labour songs are not very abundant in Madagascar. Many are improvised for the occasion; the one given below is a free translation of a song given in Dahle and Sims' "Malagasy Folk-Lore." It is still sung at times when heavy blocks of stone are being dragged on the roughest of rough carts and over the merest apology for a road, and doubtless it helps the men tugging at the ropes to get their heavy burden to its destination—the place where a grave is going to be built. The principle of mutual aid governs the labour market at these times; but it is *de rigueur* for the happy man building his grave to show his gratitude to his friends by making a feast.

"Oh, will there be any feasting?"
"Yes, there will."

"Now, ye nobles of the land, will there be a feast?"
"Yes, there will."
"Think of the roast turkey, my boys,
Heigh 'twill be fine!"

"Now, ye chieftains of the land, will there be a feast?"
"Yes, there will."
"Think of the fine fat goose, my boys,
Heigh 'twill be fine!"

"Now, ye folk pushing behind, will there be a feast?"
"Yes, there will."
"Think of the fine fat rooster, my boys,
Heigh 'twill be fine!"

"Oh, will there be any fine prime Beef?"
"Yes, there will."

"Then a long pull,
A strong pull,
And a pull altogether, boys."

JOHN SIMS AND H. OLAF HODGKIN. (3)

There are the songs of lusty cheer after the work is over, the harvest home, the fishing fleet returned.

The South Downs' sheep shearers had plenty of juiblant songs.

"So we do sit and drink, and smoke, and sing and roar,
Till we become more merry far than e'er we were before."

They recount how the master goes his rounds exhorting the men to—

"Shear them close, men, for there is but little wool."
"Shear close, boys, and shear them well." (4)

The folk lore of Northampton yields a jolly harvest song.

"Harvest home, harvest home,
Harvest home.
We've ploughed,
We've sown,
We've ruff'd,
We've mown,
Harvest home, harvest home.
We want water, and kaint get none.
Harvest home! harvest home!
The boughs they do shake, and the bells they do ring,
So merrily we bring harvest in, harvest in!" (5)

There is the tender dedication of the work of weary months, as completed it is sent to be tested in the wear of daily life.

"This is not cloth for priest or cleric,
But it is cloth for my own little Donald of love,
For my companion beloved, for John of joy,
And for Muriel of loveliest hue."

The woman's love and thought go out beyond her loom.

"May the man of this clothing never be wounded,
May torn he never be.
What time he goes into battle or combat,
May the sanctuary shield of the Lord be his—
What time he goes into battle, or combat,
May the sanctuary shield of the Lord be his." *

The old street cries of "Lavender, sweet lavender," "Old chairs," "Brooms," are quaint and interesting.

"Broomes for old shooes! Pouchings, bootes and buskings,
Will ye buy any new broome?" (6)

cries the broom man.

"New brooms, green brooms, will you buy any,
Come maydens, come quickly, let me take a peny." (7)

There is the merry chimney sweep, who "singeth and sweepeth the soote away"; the "poor widdow that selleth sand."

"And ever shee singeth, as I can guesse,
Will you buy any sand, any sand, mistress?" (8)

Some songs chant the history of the craft, and are wonderfully suggestive of the processes during work and song. The churn songs stand out among the rest of the pastoral songs for this quality; the easy swing of the first lines, short and swift—

"Come with the free, come,
Come with the bond, come,"

through to the "splash and plash" on to the pulpy stage—

"A big soft snail is here, . . .
A bogle yellow and fresh is here;" . . .

the lines grow longer and more difficult, the action is more laboured, more strenuous—

"Come—thou—churn—come—until
Butter milk to wrist,
Butter to elbow"—

at last arrives.

The Carmina Gadelica is full of these beautiful songs of labour. One sees right into the worker's little cottage, and watches the woman "smooring" the fire, at the end of the day, with the murmured prayer for the blessing of the God of life, the God of peace, the God of grace. We see her as she covers up her loom on Saturday evening at the end of the hard week's work, singing her charm to ward away the trolls and brownies lurking in the glens. She hangs the cross above the loom to keep all evil from her work.

LOOM BLESSING.

"Bless, O chief of generous chiefs,
My loom and everything a-near me,
Bless me in every action,
Make thou me safe while I live.

"From every brownie and fairy woman,
From every evil wish and sorrow,
Help me, O thou helping Being,
As long as I shall be in the land of the living.

"In the name of Mary, mild of deeds,
In name of Columba, just and potent,
Consecrate the four posts of my looms,
Till I begin on Monday.

"Her pedals, her sleay, and her shuttle,
Her reeds, her warps, and her cogs,
Her cloth-beans, and her thread-beans,
Thrums and the thread of the plies.

"Every web, black, white, and fair,
Roan, dun, checked, and red,
Give Thy blessing every-where,
On every shuttle passing under the thread.

"Thus will my loom be unharmed,
Till I shall arise on Monday;
Beauteous Mary will give me of her love,
And there shall be no obstruction I shall not over-come." *

There is the song of the consecrating of the seed, the reaping blessing, the quern blessing, the milking songs, the herding blessing, the prayer for the protection of the cattle. *

The whole of this simple people's lives was overspread with the sense of the friendly care of the Great Worker and the "heavenly hosts"; they were with them in their heavy work by day, and they rested at night under their loving protection.

The whole of the "Song of the Broad Axe," of Walt Whitman, the "Song of the Bow," by Conan Doyle; all the "Songs of Labour," by Greenleaf Whittier, giving pictures of homely toil, and the

"toiler bent,
Above his forge or plough,"

may be read. The shipbuilders, . . . who cry, "In nobler toil than ours, no craftsman bears a part"; the shoemakers, workers of the old time, styled "The gentle craft of leather," to whom St. Crispin's blazoned banner waves, are all good hearing indeed. The drovers, the huskers, the lumbermen, the mason, and the tiller of the brown earth are hearty company; and then we may hear the tale as told, not by the

worker, but by John Barleycorn himself; and another story is told by the Flax, with Hans Andersen's kindly help.

The tender song of the shepherd, by William Blake, and the lusty mowing song of Old England—

"With 1 man, with 2 men, we mow the hay together,
With 3 men, with 4 men, we mow the hay together,
My 4, my 3, my 2, my 1, no more,
We mow the hay, and rake the hay, and carry it away together.

"With 5 men, with 6 men, we mow the hay together,
With 7 men, with 8 men, we mow the hay together,
My 8, my 7, my 6, my 5, my 4, my 3, my 2, my 1, no more,
We mow the hay, and rake the hay, and carry it away together,"

and so on, are only two from the rich store of songs from the countryside.

It is good for the little workers in our schools to-day to hear of the simple folk, and to breathe something of the quiet spirit of confidence in honest work, which is about all these songs.

It is good for the children to sing their own folk songs, not standing with limp arms on the class-room floor at singing-lesson time *only*, but *as they work at the tables and benches.* The songs with a constant refrain of fol-de-lol, rifol-rifol, and derry derry down, are easily started, and can be joined in at will here and there as the worker chooses, as the basket-weaving, planing, modelling, and stitching go forward.

Dr. Carmichael has very generously given me permission to use a few of his translations of the Gaelic Songs of Labour, published in his "Carmina

Gadelica," and the lines marked with an asterisk are all from this treasure house of beautiful folk-lore belonging to the Isles of Scotland.

(1) F. E. Sawyer's "Folklore and Songs of Sussex."

(2) An old carding rhyme. Source unable to trace.

(3) I am indebted to both Mr. John Sims, and Mr. H. Olaf Hodgkins for allowing me to use this note, and the song with its two versions; they have most kindly suggested and translated the stone drawer's song for this chapter.

(4) From "Glimpses of our Sussex Ancestors" by Fleet.

(5) "Sternberg Dialect and Folk-lore of Northamptonshire."

(6) From "Citie Round," transcribed from "Meligmata," "Musical Phantasies," printed 1611.

(7) From "New Broomes—Green Broomes," a right excellent and famous comedy, called the "Three Ladies of London," printed 1584.

(8) Freeman's song of four voices, or the Second Part of Pleasant Roundelayas and such delightful catches, printed 1609. "The Songs and Ballads Relative of the London Prentices," edited by C. Makay, Esq., give many quaint and roystering songs.

CHAPTER X

SHORT RECORDS OF LESSONS

THIS chapter is really a bundle of short records which it is hoped may prove helpful to the reader; they refused to be classified under the headings of the former chapters, and have gradually made one for themselves.

The records and notes have been made by the students, teachers, and myself at different times, in different schools.

The first part of the chapter is devoted to the subjects of

(*a*) Scrap books,

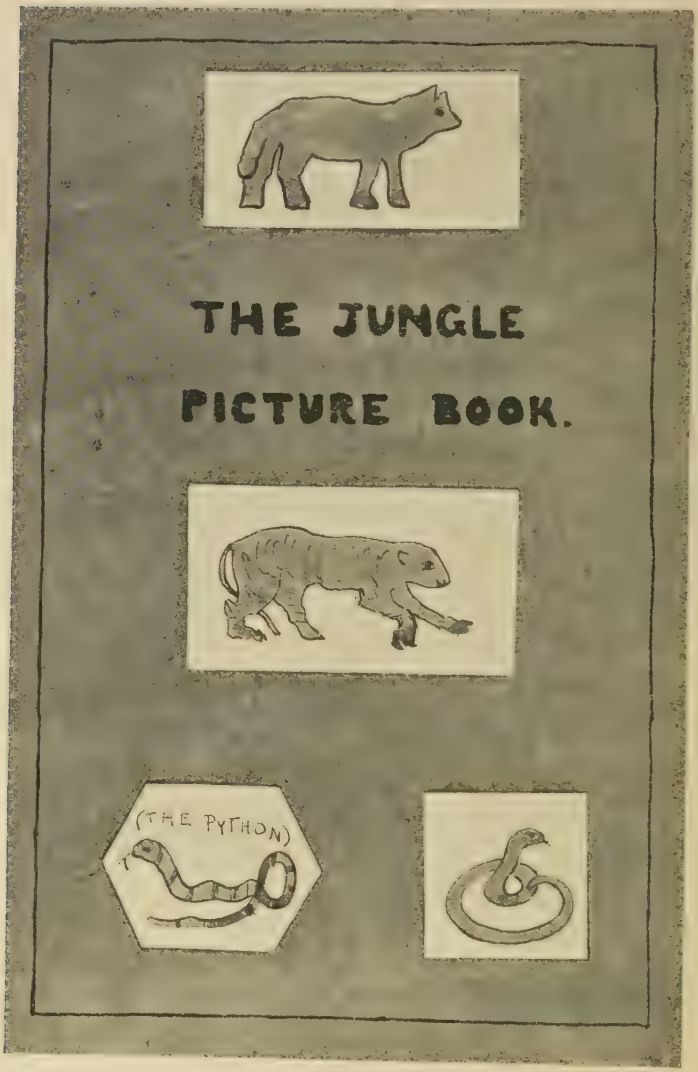
(*b*) The type model,

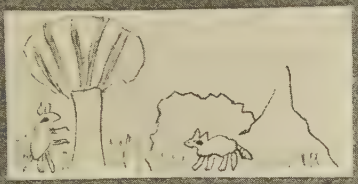
and the last part to the short records.

SCRAP BOOKS

The scrap books, or illustrative class books, have generally proved a great help in summing up and recording little sections of work, with all ages of children.

They are quite easy to make, and several children can undertake to make the class one in a handwork


THE JUNGLE
PICTURE BOOK.
(THE PYTHON)



Once upon a time there lived a boy called "Mougly" who lived in a jungle. Once, the monkey people stole him, soon he saw the kite.

There was a Bandarlog of monkeys they took Mowgli away. They hurt him too. There were

~~away and~~ The panther was angry he went to the Bear and asked him why he scolded Mowgli.

Kaa helped the Baloo to get Mowgli back come

lesson. Brown paper sheets 10 by 8 inches prove a suitable size. It is well to start with square sheets, and fold down a 2-inch margin, place these prepared sheets into little sets of six or eight and bind the sections together as in bookbinding. Paste a brown paper cover over the whole, with a well-marked back and overlapping somewhat to the front edges of the first and last pages. The extra width can then be folded along the edges and pasted on the front and last pages.

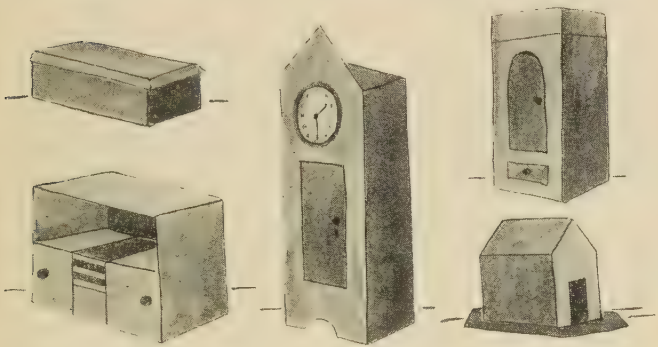
The double amount of paper at the back of the book, due to the presence of the 2-inch strips, balances the pasted pictures and specimens, etc., which the children will contribute during the term. The strips minimise the strain on the back of the book, and serve to keep the whole book from bulging unduly as the pages get filled.

Every class room has its general scrap book. The illustrations (page 182) show the cover of the Jungle scrap book kept during the telling of the Jungle Stories in Form I. Some pages were full of drawings, many of which were in colour, and others had compositions mounted on them.

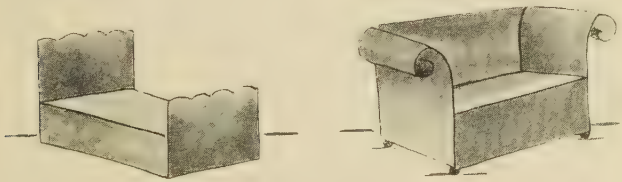
The children take great pride in the books, and specimens of weaving, spun silk, flax, etc., will be brought to strap into the pages if such are appropriate. Little quotations are carefully copied and offered too.

THE TYPE MODEL.

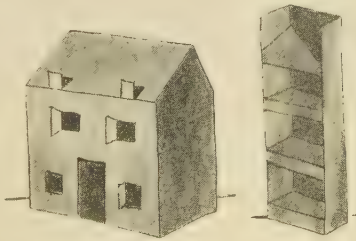
We have tried to avoid unnecessary details, direc-



tions for construction, elaboration of design in working



plans, and we have used the "type" method of the work continually.



There is always the mean to find between minute dictated directions in the early learning stages, and the crude, untaught, ruthless and nonprogressive method of leaving the

worker entirely unaided for long in his experiments with fresh material. There comes a time fairly early in the acquisition stage when it is well for the more experienced workman to gather up the experience of

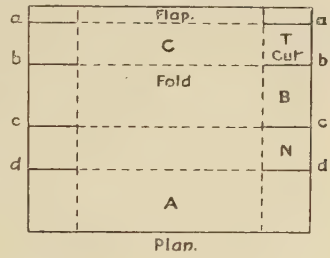
the individual experimenters, to deduce certain conclusions, to suggest a little technique, just enough to carry to the next stage with courage and success.

The type model helps. It gives a common start and

base, it leaves the worker with a satisfactory result, upon which he may work his individual will. At the beginning of the lesson all work as one, but at the end of the hour the common base has disappeared and each worker has made what seems to him good, the best.

The models are developed from a common plan. This is shown below.

A rectangular box is to be made. What are the essentials—a top, a bottom, four sides—we take certain proportionate measurements (as plan), or we measure our papers and see how we can portion out the parts. Lines (*a*, *b*, *c*, *d*) are decided upon and creased. The extra part is left for the fastening flap.



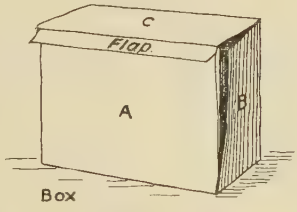
Plan.

The top and bottom have now to be considered.

What conditions the measurement?

What cuts are essential?

Figure A is the type. By modifying in various ways, all the models on pages 185 and 186 can be produced, with plenty more.

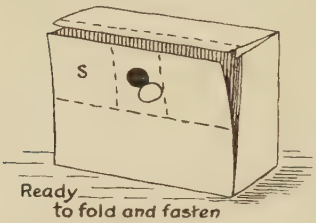


Box

Many questions arise. Is it best to cut off superfluous pieces of paper, or shall they be left for strengthening?

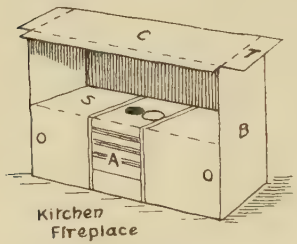
Can they be used for decoration?

What conditions the number of shelves on the bookcase in the margin of page 185?



By manipulating fold —in another way a new combination of surfaces is discovered, and a new series of models may be worked out.

After some preliminary work of this kind it is interesting to give a model ready made to the class, and get them to discover the plan, to eliminate the elaborations, to arrive at the essentials, and trace the working plan in simplest terms. This could be done with the kitchen fireplace in the margin.

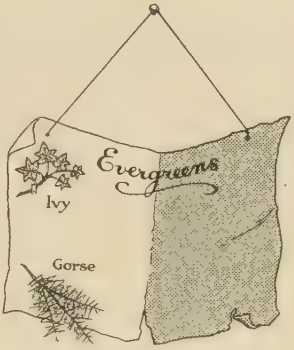


The plan is the same as that for the rectangular box. Dotted lines and one flap are left, which presently becomes the rim of the mantelshelf. The paper is folded up into a box, as in diagram 2, and the front portion A folded about the middle, so as to give a horizontal ledge, which is bent back to touch the back of the fireplace, and forms the top of the oven and the hob. A hole to accommodate the kettle can then be cut, two bars, handle, and other little additions added in colour.

RECORD.

STANDARD IV.

Nature Chart.—A set of lessons on Evergreens was being given, and the suggestion was made that the children could make a collection and fasten on cards. The results were unsatisfactory. Some cards were too large and thin to hold the heavy fir in place, some pieces were badly fastened on with stamp paper, and cotton which tore the cards ; many sheets were crumpled and ragged at the edges. The handwork time must be used. The result is shown—



Two lessons of one hour. Children and Teacher looked over the charts, and discussed ways of bettering them. The following conclusions were arrived at—

(*a*) The edges must be strengthened by binding.

(*b*) The sizes of the card had better be not less than 10 inches, or greater than 14 inches wide, and from 16 to 20 inches long. Several proportions were shown on the board.

(*c*) The fastening should be made with fine wire, neatly twisted at the back.

(*d*) The card must hang up.

(*e*) The printing might be improved.

Boards were given to some boys to cut to measure.

Sheets of brown and thick coloured paper were given to others to cut into 1 and 1½ inch strips. Methods of cutting with scissors after ruling and with knife after folding were compared.

A few boys were taught to use the punch, and manipulate it so that the small metal ring was neatly inserted.

Procedure.—The children had already bound edges and mitred corners in other models, so after a reminder of this, they worked at their own speed, neighbours often helping each other.

When the first children were ready to punch holes for hanging up, a halt was called, and discussion took place of the best ways of getting a good balance. Is it best to put the holes near to the centre, or leave a space of several inches? Is this true for all measures? Experiment roughly with a few odd pieces of card of the different measurements in the class. How can we insure the two holes being symmetrically placed?

On to work again. The holes punched and the string threaded.

The Printing.—Discussion of various types; clear plain letters are shown as Italian of fourteenth century,

Saxon of seventh, eighth, and ninth centuries, Byzantine Capitals seventh century, Italian of sixteenth century, Roman. Gothic, German text and fancy letters should not be encouraged until the plainer kind is well done.

Several copies of alphabets, capital and small letters, were distributed, trials were made on odd paper whenever the children felt they would rather practise first. Here was the psychological moment for a little technique!

The Fastening of the Specimens.—Several reels of fine flower wire were in the class, and each monitor saw that his section had a length.

The further printing was continued. The same style of lettering was kept to throughout, the children picking out each letter from the alphabetical scales in the class. Spacing was easily practised by using ordinarily ruled exercise paper turned so that the lines ran vertically. A couple of horizontal lines were ruled through these.

Standards III., IV.

A Coloured Globe for Decoration.—The frame of globe shows intersection of planes, and is a help in geometric thinking later.

The children were given a sheet of coloured paper, as thick as a thin postcard.

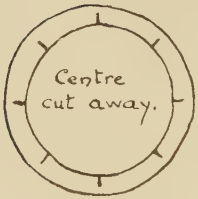
They drew five equal circles as large as their sheet would permit. It was interesting to see how cleverly some of the children planned these so that no space was unnecessarily wasted.

The sheets were compared, and economy commended.

The circles were cut out.

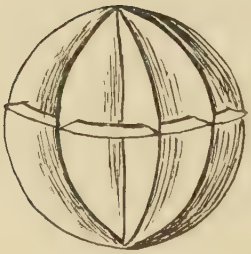
The children saw that in order for two circular discs to intersect they must each be cut to the half of the diameter.

Two were accordingly done, and fitted into each other. A third was similarly cut, but it was found to stick out, and the surface prevented it from reaching the centre.



A child suggested that it should be cut further, and a three-quarter cut was decided upon. It then fitted well. The fourth circle was cut similarly, but it stuck out about a quarter of the way.

The children saw that it was necessary to cut the first two circles quarter of the way across. They then all fitted in and closed up readily.



The fifth disc acted as a band.

The centre was cut out, and a band formed.

It was then folded into eight, in this way the position of the

eight cuts half across the band from the inside were determined and made.

Care had to be taken, as the outer circumference of the band was only the same size as that of the other circles.

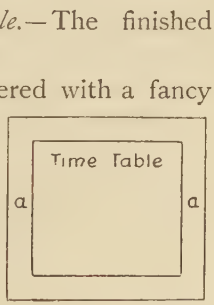
Small cuts corresponding to those on the band were made half-way down the circle, all the way round at each middle point of the edge of the discs.

The band had to be very carefully slipped on to the globe, whose sections had to be gently bent to ensure a tidy locking into the niches prepared. This was an opportunity for "every man to help his neighbour."

Standard IV.

The Mounting of a Time-Table.—The finished article was shown to the class.

It was a piece of thin card covered with a fancy paper and lined with paper on which was written the class time-table.



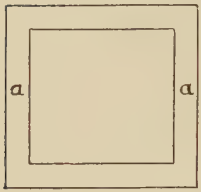
The children were invited to discuss ways and means of making similar pocket covers.

The monitors served out the cardboard (already cut to measure), and the children chose out their own coverings from the several wall-paper books in the room.

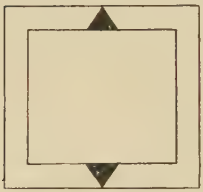
The cardboard was measured and then half cut to enable it to be bent with a clean edge.

The covering paper was also folded in half.

The edges (*a*) were folded over on the card so that the crease of the card was on top of the crease of the paper.



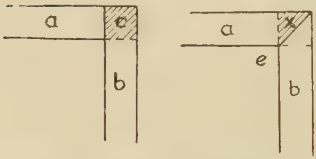
The card had now to be fixed equidistant from-the top and bottom of the paper. The other two creases were opened out, and the top and bottom edges were folded over. The folds were pressed well down, and the first finger and thumb run over all the edges to make a clean fold.



The triangular patches were cut out to ensure the easy folding down of the flap, and to get a smooth margin.

Corners. — The corners were mitred by the children who knew how to do this, and the rest managed the corners in the following stages

It will be seen on opening out the fold that a square (*c*) is formed by the folding in the corner. This may be cut out to prevent extra thickness.



(*a*) Is then folded down ; and (*b*) on top of it, (*x*) is cut off, the line (*ee*) is found by folding, and the corner is then cut diagonally across.

The time-tables had been previously written on paper by the children, the teacher had had the cards

so planned that half a sheet of foolscap would just fit inside the card, and leave a margin showing.

Some time-tables were fastened in with paste, and some with paper fasteners, whichever the children chose.

The children took the time-tables away in their pockets for immediate use.

Standard IV.

The backing of a paper-backed reader.—Some new readers had been bought. As they were only a cheap edition, with paper backs, we proposed to strengthen them. The children realised that generally they worked for themselves in the handwork hour, but it was an honour to be asked to do something for the school; here was the opportunity, and even better work than before must be given. It is incumbent upon every one to give away only of their very best.

Some strips of thick paper, brown, green, blue, and stone grey were cut to fit the book lengthways, but allowing a fairly wide margin to wrap over the other way. The children choose their own colours. A completed specimen was shown the class. Suggestions were invited as to procedure.

The children then folded down the flaps so that the books would close without any of the pages protruding beyond the stiff paper cover, and so that the paper back of the book was not crinkled.

The children noticed that the stiff paper cover did not fit the book cover well at the hinges.

They then rubbed their first finger and thumb up the hinge to make the paper fold and fit perfectly well on the back edge of the book.

Lesson II.

The books were again given out. The children were told to place the advertisement sheet as well as the paper backs under the flap of the stiff paper.

When they opened the book again, they noticed that part of the page showed advertisements. They decided that this did not look nice, and was in no wise necessary to the story ; they discussed how it could be remedied. A sheet of plain paper pasted down below the flap, over the sheet, was accepted as the best suggestion. The children were given sheets of paper and had to measure and cut to the size required.

The back and front of the book were treated in this way, and the stiff backs pasted down.

Lesson III.

The binding with different coloured binding still remained to be done. Two colours were used, blue and green.

The binding was cut into 2-inch strips, the length of the book, and into $2\frac{1}{2}$-inch squares.

Each book required one 2-inch strip and two $2\frac{1}{2}$-inch squares.

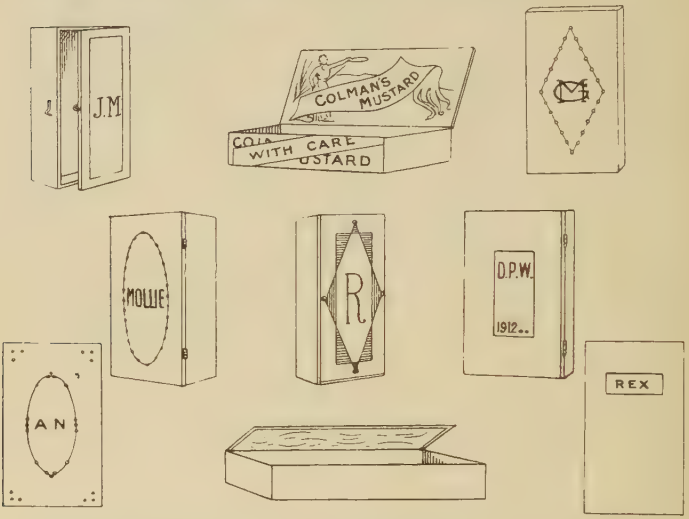
The squares were cut in half to form oblongs. The oblong was folded to find the centre. Two top corners were folded over to touch the bottom of the centre crease, and the oblong was now a double triangle, a corner ready to fit on the corner of the book. Only two triangular corners needed to be pasted. The strip was pasted down to strengthen the back of the book. Printing was now practised on odd slips of paper until the class considered it was good enough, "clear and regular" were the standard words to be transferred to the book. This was done in ink, or colour.

The books were now packed together in a pile and handed proudly over for general school use.

"All is grist that comes to our mill!"

It is an ill wind that blows nobody any good, and we have found that a rejected requisition list for materials, may often lead to a much finer stock than we could have got together had the store cupboard been full of conventional material. The older children of one standard had no lockers, desks, or places in which they could store their own possessions, and we set to work to make cupboards from boxes. Colman's boxes were the best to start upon, and with a few pennyworths of permanganate of potash, and one pound of vandyke crystals at 1*s.* per lb., we made good brown stain. The illustration shows some of the results. The children stained and designed the fronts for themselves, found their own locks and fasteners;

they not only rose immensely in self-esteem through possessing a place for their things, but the individual self grew stronger in the effort to make their special box distinctively different from the others.



This plan has only to be tried to be of immense interest to the teacher who practically *stands by and learns, growing to know his pupils more intimately than he has ever been able to do before.*

Notes of Lessons. Standard III.

Making of Shield. 1 Lesson.

To represent the Coat of Arms of York about 1138. Brown paper 6 inches × 8 inches.

Step i. Preliminary talk. Children already prepared, because shield plays a part in the history lesson.

Step ii. Shield is shown, examination by children, various ways suggested of making it.

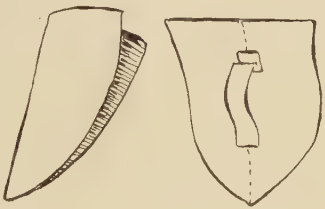
Step iii. Materials given out. One monitor serves ten children. The following stages were adopted from class suggestions, for children to work to.

(*a*) Crease down centre.

(*b*) Draw curve of $\frac{1}{2}$ as shown in diagram, and then cut double, or cut without drawing.

Step iv. Mount drawing of crossed keys and crown. [Drawn in other lessons.]

Step v. Paste or clip a strip of paper on the back, by which to hold the shield. This should draw the shield a little convex.



NOTES OF A LESSON WITH STANDARDS III., IV.

Making of a Games Board. 2 Lessons of one Hour.

1. The game played on the blackboard. Two players, each with three counters. The counters are placed in turn on any spot where the lines touch the edges, or in the centre. The game is won by the first player who succeeds in placing his three counters in a straight line.

The clumsy rubbing out entailed on the black-

board suggests the making of little boards and counters.

2. Board shown. Inquiries into the making. Counters and little box also considered.

3. Children able to go straight ahead do so, the others work in the following step with the help of the teacher.

(1) Making square paper to the size of the card (for the back) pasting.

(2) Preparing strips. Binding adjacent two edges.

(3) Mitreing the corner.

(4) The other edges and corners completed.

(5) The playing lines drawn.

4. *The counters made.*—(i) Farthings cut round out of cardboard, or slices of a bottle cork.

(ii) Three covered with paper to match the binding, to distinguish from opponents' counters.

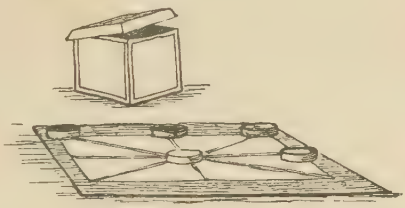
5. *Making of the box.*—(i) The area decided by placing the six counters on a thin card.

Discussion of ways of arranging six counters. Some children prefer one layer of six in a row. Others one layer of two sets of three. Others a deeper box holding only two, but stacked up three high.

(ii) Considerations of essentials of box, bottom, sides, lid.

(iii) The children make from their own measurements. A simple colour scheme may be kept throughout. The board may be bound in blue, have blue crayon lines, three blue counters, and the little paper

box may be simply decorated with blue chalk lines following the edges of the box, and the initial or name of the maker marked carefully upon the lid.



Little pieces of wall paper are chosen for the back, and paper of harmonizing colour to bind the edges.

The children move quite freely about the room, getting their materials, and matching or arranging in some other way their colour schemes. Several wall paper books are in use.

STANDARD II.

The Spanish Cart.

[The model (page 202) being rather complicated for class treatment, on account of the varied materials and tools needed, was only examined, and a working plan with verbal directions given. The children took home their sheet, and made carts for themselves, having a free choice of material.]

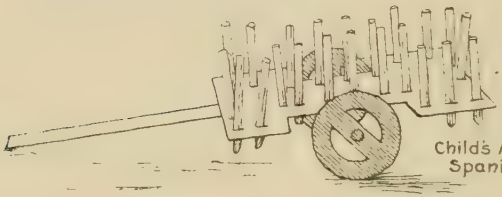
A Preparatory Lesson.

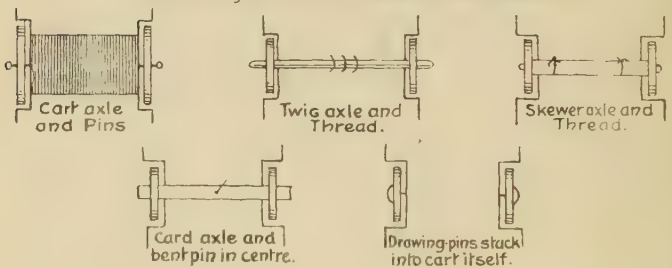
Preliminaries.—Children are to make their own working plans, as a workman would. A little chat on the simplicity, crudeness, etc., of the cart as compared with ours.

Subject Matter and Treatment.

1. *The Body of the Cart.*

(*a*) Take the model to pieces, the children see the shape is oblong. Suggest the measurements, draw plan on board, children copy with rulers on papers.




Various Ways in which Wheels were fastened
Cart axle and Pins
Twig axle and Thread.
Skewer axle and Thread.
Card axle and bent pin in centre.
Drawing-pins stuck into cart itself.

(*b*) Parts cut out for wheels. Children notice that this must be at equal distances from each end for balance.

(*c*) *Holes for sticks.*—Child is invited to put marks on the blackboard plan. Notice importance of filling in the *corners first*, so that good rectangular shape may be kept.

2. *Sticks.*—Compare length with width of cart, a little shorter, draw the line.

3. *Wheels.*—Note that width of wheels must be same as part cut out of body of cart. Children measure and note on sheet. Draw equal lines cutting at right angles to form diameters.

Leave for children to decide, after discussion, the way in which wheels may be represented. Spaces cut out, or merely chalked or coloured.

4. *The shaft and wood joining wheels.*—Compare lengths with those of cart and wheels. Discuss how they may be fastened.

Children take plans home. The illustrations show some results.

Some children said their fathers had helped them, and this was delightful; the child must needs tell Daddy about the lesson on Spain, the kind of cart he wants to make, and as "two heads are better than one," the father and child set to work. The child is in full possession of knowledge gained by the construction of the working plan, and the two *mutually help each other.* Father does not make the cart, or fix the wheels when the child is in bed, but "father and I did it;" "Daddy helped me," were the expressions almost always used where the child could not manage alone.

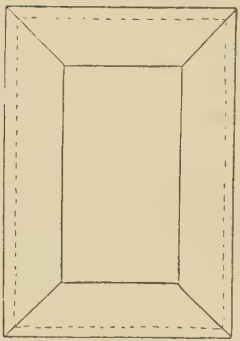
Notes of a Handwork Lesson.

Time 40 minutes. Standard III.

The Mounting of a Picture.—[The children were told to bring small pictures—not larger than postcards.]

Step 1. Cardboard cut in various sizes, and tinted sheets of plain paper given out.

2. The children choose which size of card fits their picture best, changes are effected with their neighbours sometimes.



3. The papers are now measured, so that the extra width and depth can be distributed equally.

4. The paper is folded over on to the card, first the top and bottom, then the two hand edges.

Open out the paper. Remove card. Fold over the paper till the two sides of the little corner square lie along the fold marking the edge of the card. Each corner is treated in a similar way. Place the card in again, and fold paper in old creases.

5. The flaps will be stuck, and the children readily suggest sticking another piece of paper over the flap and card showing, to make the back of the picture tidy.

6. The picture is now stuck on the reverse side of the paper.

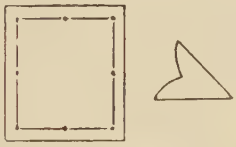
Notes of a Handwork Lesson.

Making paper d'oyleys and serviettes in paper.

Time ½ hr. Standard I.

Aims.—1. To let the children contribute to the house scheme and so develop a social feeling.

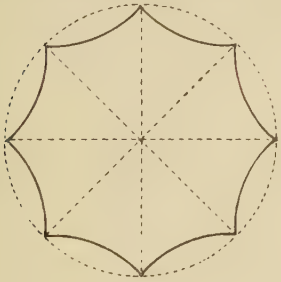
2. To show the possibilities and beauties of design.

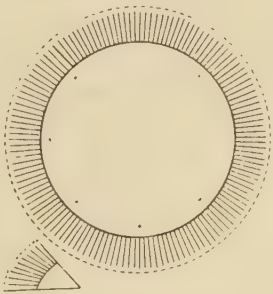


Apparatus. — Large specimens of finished serviettes, to be pinned upon the blackboard.

Each child will have a small plate or other object by which he will be able to cut out the circle, square, or oblong, out of butter-paper.

Subject Matter and Treatment.—The teacher will tell the children that they are going to contribute something decorative to the house scheme.

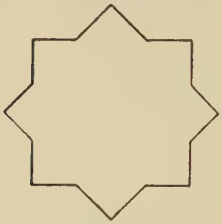


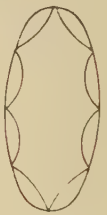


The teacher will show how pretty the d'oyleys look, pointing out what different shapes and designs can be made.

The teacher will examine the large specimens

with the children, and show that they have been cut from a circle. The circle is folded into eight equal parts, and then the edges cut in various ways, some being fringed, and others having a small curve cut out. The oblong is also cut from the circle.





The children will be divided into blocks, each block making a different shape, and each child decorating his work with crayons as he thinks suitable. The children will not use floral decorations.

If time allows, six small serviette rings will be made from strips of paper covered with bast.

Report of Student who Watched the Lesson.

Handwork Lesson.—The Cutting Out and Decorating of Paper Serviettes. Standard I.

Apparatus.—Plates, paper, scissors, crayons.

1. The circles were already cut out when I entered the room, and the shapes were very good.

2. Five different patterns had been cut out by the teacher and pinned on the board. These were numbered 1, 2, 3, 4, 5. A different pattern was assigned to each row, although some children were not clear as to which

number they belonged. This should have been made quite clear before directions were given.

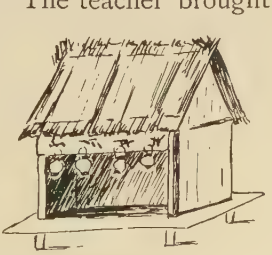
3. Directions were then given as to the cutting of the border design, and all were set to work quickly.

4. The children were then asked to decorate their serviettes with crayons. Many designs were very pretty and original, also there was a good variation. One very bright one was covered with different coloured segments joining in the centre.

5. Several children who sat near the oblong serviettes drew oblongs inside their circles, showing suggestibility of children. The unpleasant effect was pointed out to them, and the suitable edging suggested.

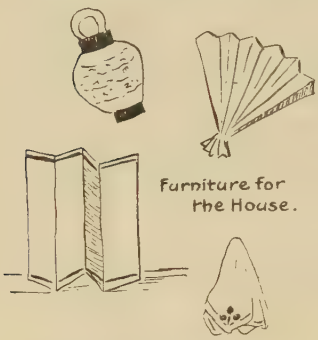
6. By showing and talking about a few of the best and worst, the children's taste was developed in the right direction.

The marginal illustrations show a few simple ways of recording lessons on Japan. The teacher brought a box modified into a house with open front, straw from wine-bottle coverings formed the roof. Little paper screens were arranged to pull forward or back at will; curious Japanese lettering was boldly painted in bright colours under the thatch. The children were invited to make and bring, the following week, straw, paper matting, a low table, and the block pillow.



Japanese House.

A painting lesson produced the Japanse lanterns, and after large ones from the model were done, wee lanterns were drawn in crayon in the corner of the large page ready to be cut out and hung in a festive row outside the little house.



Furniture for the House.

Partners made small jinrickshaws, and two or three were left outside while the owners took tea inside the house.

Another drawing lesson was given, where a child, dressed in a kimmona, posed for the class. Some of these figures were cut out and mounted to give animation to the gay scene in the land of Sunshine and Blossom.

Brown paper model in Rickshaw.

The children were shown Japanese paper-decorated handkerchiefs, and were invited to decorate some soft tough paper of similar texture in a similar way.

CHAPTER XI

A RETROSPECT

As I inquire once more into the function of handwork in life generally, pausing in the actual work with school children, I find much food for thought.

In the early days of the race, in the work of certain mission fields to-day, in the education of the negroes (Tuskagee, show us!), in the infants' and junior school, undoubtedly man learns through the hand.

The workers as yet are still concerned with particulars, they are gathering experiences among the materials of a three-dimension world, but life does not surely spell this as its end. Practical ability to manipulate the objects about us is always helpful, but mainly as a setting free of powers for other functions. Ability to translate into other terms should grow, and experiences gained are of little value unless they are clarified by being constantly brought into relationships with others, thus leading to the general enrichment.

Is there such a thing as an unwise dealing with material by the hand, so that it cripples this growing power? Is there such a thing as "putting away childish things"? Through constantly dealing with the particular, are we retarding the power to deal with the general?

On the other hand, are we allowing enough hand work in the case of those whose minds are so feeble that they can never hope to deal with more than the immediate particular? Had we not better recognise this inability and thankfully use the great service the hand can offer us, in our treatment of the feebleminded? Hand work as an expressive medium has an undoubted place in the adolescent's life, by turns showing an intensely practical, and a curiously symbolic aspect. It has its place with most adults throughout life, as a hobby, an *escape*—but to others may it not have fulfilled its purpose?

The unceasing quest for Beauty must always be continuing; the Alastors of the Race pursue the Fleeting Ideal for ever. The world is consumed with a thirst, a curiosity, an inexhaustible longing for the Flying Vision. We are conditioned so, at birth, and some find greatest joy in the expressive medium offered by material, others in the realm of pure thought, and expression in language and sound, others in the practical service to their fellows; but since the time when

"Adam delved, and Eve span"

there have always been problems unsolved, partially suspected laws working, for the world is young yet, and there is plenty of room for experiment.

It is to keep the alert mind, an enthusiasm burning with the fuel of experience, it is "not as though I had already attained."

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The Place of Industries in Elementary Education. Dopp.
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Swannel's Paper Modelling. 2*s.* 6*d.* Philip.
——-—— Weaving. 2*s.* Rafia. 2*s.* Philip.
Useful Cane Work. R. C. Jacot. 1*s.* 11*d.* Rafia. Charles and Dible. 10*d.*
Artistic Crafts Series. *All.* Bookbinding, Lettering, Needlework, Glass-work. [Hogg.]
Educational Needlecraft. Swanson and Macbeth.
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Lettering in Ornament.
Design. Dow.
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Dr. Stanley Hall. Chapters in Educational Problems.
Dr. Greville Macdonald. Chapters in the Child's Inheritance.
Helen Keller. Story of My Life. The World I live in.
Scott. Social Education.

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